A Lecture
ON
THE DIFFERENTIAL DIAGNOSIS OF CARDIAC MURMURS.

Delivered in the Extra-Academical School of Medicine, Edinburgh,

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(Concluded from page 55.)

The murmur is endocardial—is it organic or functional?[1]

It is sometimes very difficult, or even impossible, to say whether a murmur is purely organic or purely functional, for, in the first place, the two conditions are not unfrequently combined, as, for example, where anæmia accompanies aortic stenosis or mitral incompetence; and, again, a mere roughness of the endocardium may produce a murmur (an organic murmur, therefore), without causing any disturbance of the circulation or secondary changes in the heart (the usual accompaniments of an organic lesion). In the latter case the diagnosis mainly turns on the following points: (*a*) the presence or absence of the associated conditions of an inorganic murmur (symptoms and signs of anæmia), (*b*) the stability of the murmur, whether it is constant or variable, and (*c*) the effects of treatment. (See below, the Diagnosis of Inorganic Murmurs.)

Practically, the first step in the differential diagnosis is to determine the rhythm of the murmur. The so-called functional murmurs are always systolic, and are either aortic, pulmonary, or mitral.[2] If therefore a murmur is diastolic or presystolic we may, with certainty, conclude that it is organic. If the rhythm of the murmur does not decide the question—i. e., if the murmur is systolic,—we must seek to determine whether it is organic or functional by attention to the following facts:—

1. *The presence or absence of the causes of inorganic murmurs on the one hand, or of organic murmurs on the other.*—Anæmia is the great cause of the so-called functional (inorganic) murmurs. If there is no anæmia the strong probability is that the murmur depends upon organic causes. The presence of anæmia does not, however, prove that the murmur is inorganic, for, as I have previously stated, anæmia and organic murmurs are not unfrequently associated. This caution more particularly applies to those cases in which a patient suffering from rheumatic fever is anæmic. In such a case the probability is in favour of organic mischief, and a guarded prognosis should always be given. In well-marked anæmia there is the characteristic pallor, shortness of breath on exertion, tendency to vertigo and syncope on sudden alterations in position (e.g., rising from the recumbent position, venous hum in the neck, slight œdema of the feet, &c.). Where the anæmia is only slight, the presence of a venous hum (*bruit de diable*) in the neck is very characteristic, and affords important corroborative evidence that the murmur is inorganic. A history of rheumatic fever, or still more the actual presence of rheumatic fever, are in favour of the murmur being organic.

2. *The condition of the heart and circulation.*—Serious organic valvular lesions always give rise to important disturbances in the circulation and secondary changes in the heart, which will be presently described (see below). The presence of such alterations is strong evidence in support of an organic lesion. The absence of such alterations does not, however, prove that the murmur is inorganic, for (*a*) a slight organic lesion (such as a mere roughness of the endocardium), may, as I have stated above, cause a murmur without producing any interference with the circulation; (*b*) there may have been no time for such alterations to have been produced, as, for example, in recent endocarditis. Again, the dynamic murmurs which occur in profound anæmia may be associated with symptoms such as occur in organic lesions, dropsy, shortness of breath on exertion, &c.

3. *The point of maximum intensity of the murmur.*—Inorganic murmurs are most frequently heard in the pulmonary area in the second left interspace, at a point an inch and a half to the left of the sternum, less frequently over the aortic area, and more rarely over the mitral area.

4. *The extent of propagation.*—Inorganic murmurs are not, as a rule, well propagated; an aortic murmur which is propagated into the vessels of the neck, and a mitral murmur which is heard at the inferior angle of the left scapula, are probably organic.

5. *The effect of treatment* is most valuable in a diagnostic point of view[3] (for in cases of simple anæmia, chlorosis, for example, the murmur speedily disappears).

6. *The character of the sphygmographic tracing* may be of value, more especially in deciding whether an aortic systolic murmur is organic or functional. The accompanying tracing (Fig. 17) was taken from a case which was admitted to the

FIG. 17.

Aortic Stenosis.—J. B——, aged fifty-one. Admitted to Newcastle Infirmary, under Dr. Byrom Bramwell, Nov. 29th, 1878, suffering from anæmia and dropsy. There was a well-marked aortic systolic murmur; the left ventricle was not hypertrophied. The pulse-tracing seems to show that the murmur was organic, and not hæmic. Pressure 1½ oz.

Newcastle-on-Tyne Infirmary under my care some years ago. The patient, a male, was markedly anæmic; there was a well-marked systolic aortic murmur; the left ventricle was not markedly hypertrophied. The tracing seems to show that, in addition to the anæmia, there was some constriction of the aortic orifice.

7. *The sound characters of the murmur.*—Inorganic murmurs are generally soft and of short duration. Organic murmurs may also be soft and feeble, but in such cases the lesion is often serious, and there are marked symptoms of cardiac failure.

The murmur is organic. What is the extent of the lesion; and what is its gravity?—In recent cases it may be impossible to decide these points. In chronic cases, the following circumstances must be taken into consideration in estimating the extent of the lesion:—

1. *The effect of the lesion on the heart and circulation.*—It may be stated as a general proposition that the great effect of all valvular lesions is to prevent the steady onward passage of the blood-current. Obstructive lesions (stenosis) produce this effect *directly* by preventing the passage of the usual quantity of blood from those parts of the circulation which are situated behind the narrowed orifice (from the right auricle and parts behind it in the case of mitral stenosis; from the left ventricle and parts behind it in aortic stenosis). Regurgitant lesions produce this effect *indirectly* by allowing some of the blood which should be passed forwards to flow backwards through the incompetent orifice (from the aorta to the left ventricle in aortic regurgitation, from the left ventricle to the left auricle in mitral regurgitation).

In seeking therefore to estimate the extent of any valvular lesion, it is necessary to examine the effects produced:

(*A*) *Behind the lesion*, in the cavities of the heart and in the circulation behind the affected valve, more especially therefore the extent of venous obstruction.

[1] In the case of organic murmurs there is no (permanent) structural alteration of the valve itself to account for the murmur. Inorganic murmurs are due either to altered conditions of the blood itself (hæmic murmurs) or to temporary alterations in the ventricular cavities (such as dilatation), spasm of the musculi papillares, permitting temporary regurgitation. The so-called dynamic murmurs are in reality therefore organic murmurs of temporary duration. The so-called hæmic murmurs depending upon clots in the heart cavities I regard as organic, and class accordingly. Inorganic murmurs are very common in conditions of anæmia. They are always systolic, and are most frequently heard in the pulmonary area (in the second left interspace at a point an inch and a half outside, to the left, of the sternum).

[2] Naunyn, George Balfour, and others deny that the inorganic murmurs of chlorosis are ever arterial, and say that they are due to mitral regurgitation. The arguments for and against this view were stated in a former lecture.

[3] This statement does not apply to cases of progressive pernicious anæmia—the anæmia of leucocythæmia and some other affections in which treatment is frequently useless.

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(*B*) *In front of the lesion*, more especially the condition of the arterial circulation.

The more extensive the lesion the more extensive and more manifest are these effects.—This is true as a general proposition, but, as we shall presently see, the nutritive condition of the tissues (the tendency to withstand or to undergo degenerative changes) is a very important factor in the production of symptoms.

I will now briefly describe the chief effects of the different valvular lesions on the heart and circulation.

1. MITRAL STENOSIS.

A. Backward effects.

(*a*) The right auricle is over-filled with blood and becomes hypertrophied and dilated. This increase in size must be looked for by percussion.

(*b*) The pulmonary veins become engorged.

(*c*) The lungs become congested: *lung symptoms* consisting of shortness of breath, especially on exertion, going upstairs

FIG. 18.

Graphic representation of the effects of a lesion of the mitral valve (mitral stenosis in this case) on the heart and circulation. The effects of mitral regurgitation are the same, but there is, in addition, hypertrophy of the left ventricle. LV = left ventricle; LA = left auricle; PV = pulmonary veins; L = lungs; PA = pulmonary artery; RV = right ventricle; RA = right auricle; V = venæ cavæ; V^1 = venous system; B^1 = termination of the venous system in the systemic capillaries; A = the aorta; A^1 = the arterial system. The arrows show the direction of the backward pressure. The dotted lines show the effects of the obstruction (dilatation) on the different parts.

or up a hill; tendency to catarrhal affections of the lungs and bronchi, especially chronic bronchitis; œdema of the lungs; hæmoptysis from engorgement or pulmonary apoplexy; effusion into the pleural cavities (hydrothorax), &c.

(*d*) The pulmonary artery becomes engorged, the tension

FIG. 19.

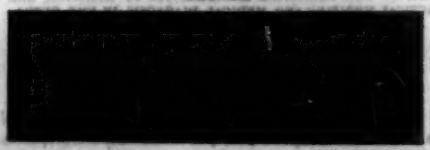
Graphic representation of the effects of a lesion of the aortic valves (aortic regurgitation in this case) on the heart and circulation. The letters have the same significance as in Fig. 18. The left ventricle is hypertrophied and dilated; the mitral valve is as yet competent.

of the blood which it contains is increased; the pulmonary valves are consequently closed with increased force, and *the pulmonary second sound is accentuated* and is louder than the aortic. The aortic second sound is less loud than in health, because of the small amount of blood passing from the left ventricle to the aorta. The accentuation, therefore, of the pulmonary second sound is in part then only apparent.

The amount of accentuation is, as Skoda was the first to point out, a gauge of the extent of the mitral lesion. *Comparative auscultation of the aortic and pulmonary second sounds should therefore be made.*

The second cardiac sound is frequently reduplicated, owing probably to delayed closure of the pulmonary segments. The right ventricle has difficulty in emptying itself,

FIG. 20.



Irregularity of the Pulse.—W. M——, aged fifty, admitted to Newcastle Infirmary under Dr. Byrom Bramwell, Nov. 20th, 1878, suffering from the usual symptoms of mitral disease. The heart's action was extremely irregular. The left ventricle much hypertrophied. There was no rheumatic history. The symptoms were of two months' duration. Pressure 2¼ oz.

and its contraction occupies more time than that of the left hence the pulmonary segments are closed a little later han the aortic.

(*e*) The right ventricle becomes engorged, hypertrophied and subsequently dilated. *The increased size of the right heart is to be ascertained by percussion.*

(*f*) The right auricle becomes engorged, hypertrophied, and dilated.

The tricuspid valve ultimately gives way and becomes relatively incompetent. When this occurs, a systolic tri-

FIG. 21.

Small Pulse of Mitral Regurgitation.—H. M——, aged seven, admitted to the Newcastle Infirmary, under Dr. Byrom Bramwell, Oct. 16th, 1878, suffering from mitral regurgitation and severe bronchitis. There was considerable hypertrophy of the left ventricle. The tracing was made when the patient was convalescent from the bronchitis. Pressure 1½ oz.

cuspid murmur and venous pulsation in the neck (right external jugulars) are present.

(*g*) The systemic venous circulation becomes engorged.[4] The face, more especially the lips, becomes blue and slightly swollen. Dropsy commences in the feet, and gradually extends upwards, finally affecting the peritoneum and other serous cavities. Cardiac dropsy is most marked at night, and is frequently absent in the morning. It commences in the feet because the circulation is there slowest, the feet being the

FIG. 22.

Mitral Regurgitation.—M. A. C——, aged sixteen, admitted to Newcastle Infirmary, under Dr. Byrom Bramwell, Jan. 24th, 1878, suffering from cough and shortness of breath, dating from an attack of rheumatic fever two months previously. Heart's action very rapid (120-130). The first sound appeared to be reduplicated; a systolic murmur at the apex, audible when the heart became slower. Pressure 3 oz.

parts of the body most distant from the heart, and because the return current from the feet has, when the patient is in the erect position, to overcome the force of gravity.

Engorgement of the stomach, with resulting chronic catarrh, foul tongue, &c.

Engorgement of the liver, enlargement of that organ,

[4] This, of course, occurs before the tricuspid incompetence mentioned above.

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slight jaundice, possibly towards the end of the case, hepatic venous pulsation.

Engorgement of the kidneys, scanty urine containing abundant urates, albumen, but no casts.[6]

Engorgement of the brain with mental cloudiness, tendency to sleep, &c.

I have attempted to represent graphically the backward effects of mitral and aortic lesions in Figs. 18 and 19.

B. Forward effects.—Small and variable quantities of blood are passed into the left ventricle through the stenosed orifice. Small and variable quantities of blood are consequently pumped into the arterial system, the pulse is therefore small, unequal in volume, and irregular in time. The sphygmographic characters of the pulse are not very distinctive. Mahomed thinks the occurrence of a second small imperfect contraction may be peculiar. (See Fig. 20.)

FIG. 23.

Mitral Regurgitation.—S. B——, aged fifty-eight, admitted to the Newcastle Infirmary, under Dr. Byrom Bramwell, Feb. 25th, 1878, suffering from cardiac dropsy. There was a well-marked mitral systolic murmur, which disappeared under treatment. The heart was considerably enlarged (hypertrophied and dilated). Pressure 4 oz.

The contraction of the left ventricle is less powerful than in health, and the first sound, as heard over the left heart, is modified in the manner already described. The left ventricle is not increased in size; in fact, in some cases it is smaller than in health.

MITRAL REGURGITATION.

A. Backward effects.—The same as in mitral stenosis. (See previous page.)

B. Forward effects.—The pulse is small and irregular, but not so unequal in volume as in mitral stenosis. The sphygmographic characters are seen in Figs. 21, 22, 23, 24.

The left ventricle is hypertrophied. The explanation of this is difficult. It is probably due to increased stimulation of the muscular wall of the left ventricle by the large quantity of blood which is poured into it from the left auricle (there is no obstruction at the mitral valve, and the tension of the blood in the left auricle and parts behind, is increased). In some cases the increased thickness of the wall of the left ventricle is the result of previous inflammatory changes in the pericardium and subjacent muscle, increase of the connective tissue and fat; in such cases the hypertrophy is false.

FIG. 24.

Irregular and Intermittent Pulse.—O. M——, aged forty, admitted to the Newcastle Infirmary, under Dr. Byrom Bramwell, suffering from cardiac dropsy. The heart was very much enlarged; apex-beat 4½ inches below and 3 inches outside left nipple; systolic mitral murmur. Pressure 3 oz.

AORTIC STENOSIS.

A. Backward effects.—The left ventricle becomes hypertrophied, in consequence of the increased effort required to force the blood through the stenosed orifice. So long as the mitral valve is sound, there are no *lung* or *venous symptoms* such as are seen in mitral lesions. (See Fig. 19.)

B. Forward effects.—The pulse is small but regular, and of good tension. The sphygmographic characters are seen in Fig. 17.

The smallness of the pulse and the amount of hypertrophy of the left ventricle are important indications of the amount of stenosis.

AORTIC REGURGITATION.

A. Backward effects.—The left ventricle becomes hypertrophied and dilated, the dilatation being partly due to the pressure which the regurgitant current exerts on the ventricular wall while in a condition of relaxation, partly to the impaired nutrition which results from interference with the coronary circulation.

So long as the mitral valve remains competent there are no lung or venous symptoms. Relative incompetence sooner or later results from the ventricular dilatation. Lung and venous symptoms are then superadded.

FIG. 25.

Aortic Regurgitation.—Case: G. A——, aged fifty-six, admitted to Newcastle Infirmary, under Dr. Byrom Bramwell, Feb. 21st, 1878, suffering from shortness of breath and swelling of feet. Had been ill for three months. The face was pale and anxious, lips slightly dusky. Double aortic murmur; heart considerably hypertrophied; apex between sixth and seventh ribs, 2 inches below and 2 inches outside left nipple. Considerable hypertrophy and engorgement of right heart. Died March 5th, 1878. Aorta very atheromatous; aortic valves very incompetent; segments shrunken, turned in towards the ventricle; coronary arteries much obstructed; cardiac walls fatty; left ventricle dilated; pericardium adherent. The arteries were practically empty during cardiac diastole. *a—b* = percussion-stroke; *b* = apex; *c* = tidal wave; *d* indicates the position of the aortic wave, which is absent in this tracing. Pressure 2½ oz.

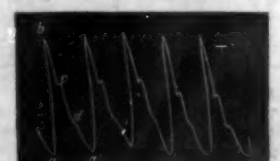
B. Forward effects.—The pulse is highly characteristic, presenting the well-known jerking, visible, collapsing, and tortuous character first described by Corrigan.

The sphygmographic characters of the pulse are seen in Figs. 25 and 26. The face is pale, and often wears an anxious expression. There is a tendency to syncope.

The amount of alteration of the pulse, the degree of hypertrophy and especially the degree of dilatation of the left ventricle, and the condition of the mitral, are the points to which attention should be particularly directed in the examination of a case of aortic regurgitation.

In many cases of aortic regurgitation, especially where the base of the aorta is atheromatous and the coronary circulation is interfered with, pain of an angina-like character, or attacks of true angina, are experienced.

FIG. 26.



Aortic Regurgitation.—Taken from same patient as No. 25 after administration of digitalis. The letters have the same significance as in Fig. 25. Pressure 3 oz.

The effects produced by *pulmonary* and *tricuspid* lesions will be readily appreciated after what has been said in describing the effects of mitral lesions. Primary pulmonary and tricuspid lesions are of great rarity. Secondary tricuspid regurgitation frequently occurs. The character and amount of the venous pulsation in the neck is of great importance in gauging its severity. (See Table, next page.)

The gravity of the lesion depends upon—1. *The extent to which the lesion can be compensated.*—In all cases of valvular lesion there is an attempt made by nature to meet the difficulty. The hypertrophy of the left ventricle which follows stenosis of the aortic orifice is the best example of this fact.

In many cases the balance between the lesion on the one hand and the compensatory changes in the heart on the other is so even that little or no disturbance of the circulation, and hence no symptoms result. The extent, therefore, to which the lesion can be compensated, and the length of

[6] A few hyaline casts are sometimes seen. Other forms of casts may, of course, be present as the result of secondary changes in the kidney, or of intercurrent inflammatory attacks.

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TABULAR STATEMENT SHOWING THE POINTS OF DIFFERENTIAL DIAGNOSIS OF CARDIAC VALVULAR LESIONS.

Lesion.	Characters of the Murmur.			Effects of the Lesion on the Heart and Circulation.								
	Point of differential maximum intensity.	Rhythm.	Directions of propagation.	Left ventricle.	Left auricle.	Lungs.	Pulmonary second sound.	Right ventricle.	Tricuspid valve.	Right auricle.	Systemic venous circulation.	Arterial circulation; pulse.
Mitral stenosis.	Apex, which is normal.	Presystolic.	Downwards and inwards, to a limited extent.	Normal or small.	Dilated and hypertrophied.	Engorged lung symptoms.	Accentuated.	Hypertrophied and dilated.	Towards end may be incompetent.	Dilated and hypertrophied.	Engorged; dropsy; face blue, and effects of engorgement of stomach, liver, kidneys, brain, &c.	Small, weak, unequal in volume, irregular in time.
Mitral regurgitation.	Apex, which is displaced downwards and outwards.	Systolic.	Upwards and outwards to left axilla, and inferior angle of left scapula.	Hypertrophied and dilated.	Dilated and hypertrophied.	Engorged lung symptoms.	Accentuated.	Hypertrophied and dilated.	Towards end may be incompetent.	Dilated and hypertrophied.	Engorged; dropsy; face blue, and effects of engorgement of stomach, liver, kidneys, brain, &c.	Small, weak, and irregular in time.
Aortic stenosis.	Second right costal cartilage.	Systolic.	Upwards along course of aorta, and into vessels of neck.	Hypertrophied.	Normal.	Normal.	Normal.	Normal.	Normal.	Normal.	Normal.	Small, regular, and of good strength.
Aortic regurgitation.	Second right costal cartilage, mid. sternum, lower end of sternum.	Diastolic.	Downwards to lower end of sternum.	Hypertrophied and dilated.	Normal so long as mitral valve is sound.	Normal so long as mitral valve is sound.	Normal so long as mitral valve is sound.	Normal so long as mitral valve is sound.	Normal so long as mitral valve is sound.	Normal so long as mitral valve is sound.	Normal so long as mitral valve is sound; face pale.	Jerking, visible, collapsing, and tortuous.
Tricuspid regurgitation (usually secondary).	Lower end of sternum.	Systolic.	Upwards and outwards towards right.	Normal if lesion is primary.	Normal if lesion is primary.	Normal or anæmic if lesion is primary.	Weak if lesion is primary.	Hypertrophied and dilated.	Incompetent.	Dilated.	Engorged; venous pulsation in neck; dropsy, &c.	Small, weak, irregular.

time which this compensation can be maintained, are most important points in estimating its gravity.

The extent of compensation depends upon:

(*a*) *The general reparative power of the individual.*—A valvular lesion of moderate extent occurring in an individual whose tissues are prone to degeneration or already in a state of decay is much more serious than a lesion of far greater extent in a healthy person.

(*b*) *The special reparative power (conditions of nutrition) of the cardiac muscle.*—So long as the cardiac muscle remains sound (the hypertrophy good), compensation is maintained and symptoms are at a minimum. Wherever degeneration of the cardiac muscle and consequent dilatation occur compensation fails and serious symptoms result.

The structural soundness, therefore, of the cardiac muscle (the presence or absence of dilatation) is of the utmost importance in a prognostic point of view.

2. *The extent of the lesion.*—Other things being equal, the more extensive the lesion the more serious the case.

3. *The nature of the lesion.*—Clinical experience tells us that some valvular lesions are more serious than others. Walshe gives the following as the order of relative gravity, estimating the gravity not only by the ultimate lethal tendency of the different lesions, but by the amount of complicated miseries which they inflict.

1. Tricuspid regurgitation (most grave).
2. Mitral regurgitation.
3. Mitral constriction.
4. Aortic regurgitation.
5. Pulmonary constriction.
6. Aortic constriction (least grave).

The relative gravity as regards tendency to sudden (instantaneous) death is, however, quite different. *Aortic regurgitation* frequently proves suddenly fatal by syncope. The other valvular lesions do not cause sudden death.

4. *The surroundings and habits of the patient.*—Valvular lesions, other things, such as the condition of tissues, &c., being equal, are much less serious in persons in comfortable circumstances than in those who struggle for existence, and have to lead laborious lives. Indeed, rest to the damaged organ is the first and most important indication for treatment.

5. *The mental temperament of the patient* is, for the same reason, of some importance. Valvular lesions are less serious in persons of a quiet and placid disposition than in persons of an excitable and anxious temperament.

6. *The age of the patient* is of some value, as it gives a general idea of the qualitative state of the tissues.

In young subjects compensation is much more active than in old people. This is not, perhaps, an unmixed evil; it would almost seem that in some cases of valvular lesion running a rapid course in young subjects, that the lesion grew *pari passu* with the general bulk.

7. *The etiology of the lesion.*—Valvular lesions of rheumatic origin are, as a rule, less serious than those which result from other causes, probably because the average age of rheumatic cases is younger than that of others, and hence the reparative process and compensation are more perfect. Non-rheumatic valvular lesions are often due to degenerative processes. In such cases repair and compensation are slight, and there are often complications, such as structural kidney lesions and the like.

Acute valvular lesions occurring in the course of pyæmia, scurvy, and other blood diseases (ulcerative endocarditis) almost invariably give rise to speedy death.

8. *The associated pathological conditions* are of great importance. In fat, flabby individuals, and in all cases in which the tissues are prone to degenerate, the prognosis is bad. Kidney disease and other complications, of course, render the case more serious.

9. *The duration of the case and the effects which the lesion has already produced* are of great value. The shorter the duration and the greater the effects, the worse the prognosis.

In speaking of the prognosis I have said nothing with regard to the sound character of the murmur. The mere loudness of a murmur is no criterion of the gravity of the lesion. The loudness of a murmur depends in great part upon the force of the blood-current which produces it. Where the heart is feeble or the walls degenerated, the murmur is less loud than where the cardiac muscular tissue is sound. Hence feeble murmurs are frequently more serious than loud ones, and indeed in some of the worst cases of valvular disease, as, for example, in extreme mitral stenosis, there may be no murmur at all.

ABSTRACT OF

The Brown Lectures.

FURTHER INVESTIGATIONS ON ANTHRAX AND ALLIED DISEASES IN MAN AND ANIMALS.

BY PROF. W. S. GREENFIELD, M.D., F.R.C.P.

LECTURE III.

ANTHRAX IN MAN.

ANTHRAX may affect the human subject in at least three different ways—malignant pustule, anthrax œdema, and internal anthrax. *Malignant pustule* occurs almost invariably as a primary lesion following direct inoculation. It is usually seated on the face, neck, or hand, or some exposed part of the body, and commences by a small red point or pimple, which may be painless, or attended by a sensation like that of the sting of an insect. A small papule speedily forms, which becomes covered by a flat vesicle, which enlarges and usually bursts, discharging a clear or bloody fluid. A central black eschar forms at the base of the discharged vesicle, and other smaller vesicles form around it. The surrounding tissues become inflamed, so that the vesicle is seated on a hard red base, with a sort of erysipelatous blush and swelling extending a considerable distance around. The central eschar enlarges, and the corona of vesicles, as well as the inflammatory sore and œdema, increase to such an extent that when seated on the face, the entire side of the face, head, and neck may be involved in the œdematous swelling. There is often enlargement of the corresponding lymphatic glands. If the patient survive the central slough separates, the wound granulates, and the œdema and lymphangitis subside. The constitutional symptoms vary very greatly. They may be slight or wanting, even when the local condition is most typical, or there may be slight depression and some febrile symptoms. Far more commonly there is marked fever, the temperature rising as high as 106° F. or more, and there are severe constitutional symptoms, either shivering, vomiting, accelerated pulse and respiration, great prostration and anxiety, delirium, and rapid death, sometimes in convulsions, or great depression and prostration, sleeplessness, laboured breathing, profuse perspirations and other symptoms of fever with exhaustion, ending sometimes in delirium. Death may occur in thirty or forty hours from the formation of the pustule, or the patient may die at the end of four, five, or six days, not often later. The following cases may be cited as illustrative of the disease:—

CASE 1. (Communicated by Dr. Bell of Bradford.)—J. G——, aged thirty-six, a woolsorter, in good health, had been sorting Persian wool till June 9th, and from that time to June 19th Bokhara wool, noticed a small pimple on the anterior and outer surface of the arm over the elbow-joint on June 15th. On the 18th it was inflamed and painful, but he continued at work. On the 21st there was a bulla an inch in length and three-quarters of an inch in breadth, with a dark-coloured base and filled with serum; the skin and tissues for an inch around were hard, and the inflammation extended to the upper third of the arm and lower third of the forearm and two-thirds around. He did not feel ill; his appetite was moderate; he slept well; pulse 68. For a few days the vesication extended at the margin of the sore, but on June 28th the slough was detaching, and the man completely recovered. There was not apparently any enlargement of the axillary glands. Blood taken from the brawny swelling around the sore contained scarcely any bacilli, but a few typical bacilli were found in the serum from the vesicles around the slough on June 23rd, and on inoculation of a guinea-pig with a very minute quantity, death ensued in twenty-nine hours, and its spleen, which was greatly swollen, soft, and vascular, swarmed with bacilli when examined an hour after death, so that in a very mild case as regards general symptoms the poison was present in the most virulent form.

CASE 2.—W. E——, a boy, aged fifteen, employed in the yard of a factory where Van mohair was largely used, went one day into the room where his brothers were sorting this wool, and whilst playing with them they pushed him into the wool head foremost. This was on June 23rd. At that time he had a small pimple over the outer angle of the left malar bone. On the 25th a change was observed in the pimple, but no special notice was taken of it. On the 29th, when he got up, the eyelid and side of the face were swollen, and in the afternoon he felt so poorly that he had to come home from work. He was not, however, seen by Dr. Logan until the evening of July 1st, when the whole side of the face and neck were swollen, and in place of the pimple was a vesicular ring, with a bulla in the middle which had burst, having a dark depression in the centre. Temperature 105°; pulse rapid and weak, and he was delirious. Later there formed the usual black eschar, which reached the size of a florin. He was very ill for four or five days. Dr. Greenfield saw him on July 10th. He was then able to walk, but still very weak. There was a very typical black eschar the size of a shilling, surrounded by a narrow ring of vesicles and a still swollen indurated base. The swelling of the face continued, and there was very great engorgement of the lymphatic glands of the neck and the supra-clavicular region of the same side. Blood taken from the margin of the swelling on July 6th was without effect on inoculation.

CASE 3.—A man, aged sixty-three, the minder of a preparing box, the machine through which the wool is passed after it has been sorted. He noticed on Aug. 28th that his lower lip was swollen, and that a pimple which he had had for about a week below the lip was inflamed and painful. On the 29th he was up and in bed repeatedly; did not feel well; vomited once. Next day the swelling increased, and in the evening of the 31st he sent for the doctor, who found a vesicle, with an inflamed hæmorrhagic base about the size of a sixpence; this burst, leaving a dry gangrenous-looking centre surrounded by a ring of vesicles, the whole being on a very inflamed base. There was great surrounding swelling, and the submaxillary lymphatic glands were much swollen. Considerable improvement occurred the next two days, but on the night of Sept. 3rd he became delirious, and at 10 A.M. on the 4th he was comatose—temperature 105°, pulse 140, respiration 33—and died at 2 P.M. The serous fluid taken from the vesicles on the lip, and the blood from the surrounding swelling on the day of death, contained typical anthrax bacilli.

Internal anthrax.—It has been known for some time that there are cases of rapidly fatal disease by means of an internal inoculation. In 1872 Wagner published such a case, which he called "mycosis intestinalis," and two years later he wrote a paper entitled "Intestinal Mycoses, and their Relation with Splenic Fever," in which he recorded eight cases, where, in addition to the gastro-intestinal lesions, there was bacillus anthracis in the blood. In its general character and mode of onset this "intestinal mycosis" resembles in some respects the form shortly to be described of internal anthrax or anthracæmia. But other symptoms appear early, as vomiting, sometimes dysphagia, slight pain and uneasiness in the abdomen, colic, or diarrhœa. The diarrhœa may be bloody from the first. There is great prostration, cyanosis, and collapse, often without elevation of temperature. Death may occur in twenty-four hours, or be delayed two or three days. Post-mortem: There is often some blood-stained serum in the peritoneal cavity; the mesenteric and retro-peritoneal glands are infiltrated with semi-gelatinous fluid; the walls of the stomach and parts of the intestine are swollen and congested, with submucous hæmorrhages sometimes. The enteric mucous membrane may be injected or merely stained with blood. The intestinal canal contains blood-stained mucous or watery blood-stained fluid. Rarely there occur pustular or carbuncular foci in the intestines. In addition to these special local conditions there may be one or more of the conditions met with in the general and pulmonary forms. Other observations on supposed internal anthrax, by Huber and Butler, Leydig and others, were next referred to.

The observations of Frisch upon rag-disease (Hadern-krankheit) were then briefly described; they are not at all conclusive, but rather against the view that this disease is anthrax in any form. The mode of death of the dog inocu-

lated with blood taken from subjects of the disease differed from that of anthrax, and the organisms found in the dog's blood were not bacilli but spores. Rabbits experimented on died much more rapidly than in anthrax, and all points to the affection being a peculiar form of septicæmia. Very similar effects were obtained by Dr. Greenfield in some experiments, narrated in his lectures last year, of inoculation with putrid blood, which had been kept for several weeks, taken from horses which had died of supposed anthrax at the Cape.

In the report of the medical officer of health for Glasgow, Dr. James B. Russell (Report of the Medical Officer of the Local Government Board, 1878), a number of cases of malignant pustule occurring amongst hair-spinners working in Russian horsehair were narrated, and reference is made to cases of fatal illness amongst workers in the same factory, which he believes must have been due to the same cause, although without external pustule. But there do not appear to be any satisfactory records of cases of disease of the form under consideration, and therefore it may be well to give an outline of the facts recently revealed by the investigation of so-called "woolsorters' disease" at Bradford, especially as their connexion with anthrax has been conclusively established.

A number of cases of death had occurred amongst workmen employed in wool-factories in Bradford and its vicinity, especially amongst those engaged in sorting and preparing in the raw state certain kinds of mohair. It had been observed that these cases were almost entirely limited to these men, that they occurred in batches, that they had no special relation to age or previous health, and that they were attended by a peculiar train of symptoms, leading usually to rapid death, sometimes with pulmonary symptoms. Slighter ailments, sometimes even grave symptoms from which recovery ensued, and cases of malignant pustule and boils of various kinds, also occurred amongst the same class of workmen. The disease was so clearly associated in some way with the wool and hair that the working of it was regarded with dread; and at last, a number of cases occurring about the same time, the subject became manifestly one for inquiry. (This was undertaken for the Local Government Board by Mr. John Spear in association with Dr. Greenfield.) It is to the untiring industry and devotion, the steady pertinacity, combined with the scientific acumen of a member of our profession—Dr. Bell of Bradford—that the credit both of working out the history of the disease and first suspecting its cause is unquestionably mainly due.

Dr. Greenfield then gave an account of the origin of the kind of wool which is most infectious—the Van or Persian mohair; the most deadly being that which is classed as inferior, and contains together with much dirt many so-called "fallen fleeces"—i.e., the fleeces of animals dying a natural death. It is the sorting of this wool—a process which leads to the disturbance of a quantity of dust—that is so dangerous. The wool waste, the dust which collects from the sorting, is almost invariably used as manure; and the water employed in washing is sometimes passed into the sewers, whence it may be distributed over sewage farms. Instances of splenic fever in cows and sheep on pastures so irrigated were related in the first lecture.

The clinical records of woolsorters' disease permits of its division into three classes—one in which the symptoms are fulminant, intense, and rapidly fatal; another in which though severe, the fatal issue is delayed three, four, or five days; and a third in which the disease extends over a week, and is fatal, if at all, from secondary complications. The symptoms of the more rapid form are well illustrated by a case which has been recorded by Dr. Bell in THE LANCET of June 5th, 1880. This was a case of a man, fifty-eight years of age, previously in perfect health. On June 28th, 1877, he said on reaching home that he had opened a bad bag, and had some very nasty and offensive work. He slept well through the night, was up early next morning, had breakfast, and said nothing about feeling unwell. He perspired much at his work, and at 10 A.M., feeling very unwell, had to leave. He had great difficulty in walking home—two miles and a half—was much exhausted, and went to bed, oppression of breathing being especially noticed. He was seen at 7 P.M., was then perspiring freely; there had been no shivering or chilliness, no vomiting, thirst, or pain. There was some wheezing in the trachea; very little cough; no expectoration; respiration 34; expiration prolonged; no dulness on percussion; some rhonchus over right base, but no moist sounds; axillary temperature subnormal; rectal 102·2°. At 11.30 P.M. aspect anxious, face pale, with slightly leaden hue. He said he felt very poorly, but had no pain; respiration became more laboured; pulse rapid and irregular; and he died three hours afterwards. Such intensely rapid cases as these, though probably not uncommon, have not recently come under observation, but cases having these clinical features are not uncommon in some other centres of wool or hair manufactories. More frequently the symptoms resemble those of other forms of blood-poisoning. The onset is often sudden, sometimes gradual, and preceded by malaise for some days, with all the various general premonitory symptoms which are apt to usher in other acute febrile and septic diseases.

Of the declared symptoms, the earliest are usually great prostration and a sense of oppression of breathing. Distinct shivering or rigor appears to be rare, initial vomiting is not frequent. There may be headache, nausea, but this may be absent and appetite be good. An emotional condition and occasionally a sort of hysterical state may be shown early in the case. It often happens that the patient is so unconscious of any danger, that he refuses to send for a doctor until within two or three hours of death, and in several recorded cases has attempted to go to work, or even done so, within five or six hours of death. The respiratory symptoms are generally well-marked at an early stage. The breathing is laboured and difficult, not usually much accelerated, and often with a sense of pressure or constriction. There may be only slight blood-stained expectoration, or this may be profuse, or, on the other hand, absent. Nothing beyond slight rhonchus is to be made out on physical examination. The pulse is usually rapid and weak, occasionally irregular. The face is sometimes congested, more commonly pale, with a slight cyanotic tint. The extremities are cold and bluish, and the temperature of the surface of the body subnormal. The rectal temperature is usually two or three degrees higher than the axillary, or there may be even greater difference. Profuse and repeated perspirations are not uncommon. The appetite may be good and digestion also apparently good, but vomiting is not uncommon, and it may be repeated and urgent, and not related to food. Diarrhœa is occasional, not constant or bloody. The mental condition varies: anxiety and depression are the rule in the early stages; later the mind may be clear to the last, or delirium may set in some time before death. Convulsions are not uncommon at the stage of collapse, a comatose condition being present in the intervals of the convulsions. As the case progresses the dyspnœa becomes more intense, and death sometimes occurs quite suddenly, as if from syncope or collapse. When more prolonged there are abundant rhonchi and mucous râles over the entire chest, especially posteriorly, and percussion dulness at the bases may be found. Occasionally tetanic spasms or coma lead to the fatal issue. The rectal temperature is seldom higher than 102°-or 103°, and in some cases has been normal or subnormal. A higher temperature is frequently present in cases of external malignant pustule, and also in some of the cases diagnosed as woolsorters' disease, and generally in the most favourable cases. There may be a secondary pneumonia, attended by the usual symptoms, and fatal at a later period.

The post-mortem appearances vary considerably; the differences observed appear to depend partly upon the duration of the disease and partly upon the point of entrance of the poison into the system. No cases resembling "intestinal mycosis" have been observed in the cases of woolsorters' disease that have been investigated. In the more rapidly fatal cases the lesions resemble much those found in ordinary bovine splenic apoplexy, or in the lower animals inoculated with the intensest virus. There is usually a marked cyanotic appearance, and decomposition is said to be somewhat rapid. There is no external swelling, no petechiæ, no swelling of throat or neck. The lung tissue may be congested or quite natural; there may be ecchymoses beneath the bronchial mucous membrane and in the pericardium. The abdominal viscera show no change, except slight cloudy swelling of the kidneys and liver. There may be hæmorrhages in the lungs, heart, kidneys, and other organs. These cases are much rarer than those in which there is cellulitis in the neck, especially around the pharynx, and more often blood-stained serous or gelatinous infiltration of the mediastinal tissues. The bronchial glands are swollen, softened, and congested, with more or less hæmorrhage into or around them. The tissues at the root of the lung may be similarly infiltrated, and there may be from one to two pints of fluid

in the pleuræ, with consequent partial collapse of the lungs. There may be blood-stained secretion in the bronchi, yellowish or blood-stained fluid in the pericardium, and ecchymoses in the visceral layer. There may be ecchymoses beneath the endocardium, and into the muscular tissue of the left ventricle; and blood-staining of the endocardium rapidly takes place. Sometimes submucous ecchymoses in the pharynx, and slight in the stomach, but nothing in the intestinal tract. The spleen is hardly, if at all, changed, the extremely vascular and almost diffluent condition observed in animals not being met with. Nothing noteworthy in the liver; but the kidneys are often swollen and the seat of ecchymoses. Rarely there is serous infiltration beneath the peritoneum, or less commonly along the retro-peritoneal glands. Brain is usually healthy, less frequently there are ecchymoses in the pia mater, or extensive hæmorrhages. Rarer conditions are large hæmorrhages in front of the pericardium and into the mediastinum, or around the pharynx, with swelling of the cervical glands. The rarer conditions met with in prolonged cases consist in hæmorrhagic infarctions in the lungs, sometimes accompanied by superficial pleurisy; or less often patches of broncho-pneumonic consolidation, sometimes with softening or suppuration. This condition must be regarded as due not merely to prolonged congestion, but to the presence of blood-poisoning, or possibly some predisposition. They may occur in cases in which the history points to the anthracial origin, and in which also bacilli are found in some of the fluids.

Dr. Greenfield next proceeded to detail the evidence upon which the foregoing observations were based. He showed that the whole subject of anthrax is in a transitional state, that the criteria for its diagnosis hitherto accepted are obviously inadequate, and that in order to insure proper attention to the prevalence of the disease and the modes of its diffusion, every possible objection and difficulty must be met, however trivial.

GROUP A. *Cases in which no definite result was gained by inoculation.*

These cases were also first in chronological order.

CASE 1.—That of a man employed for some weeks in sorting Van mohair until Saturday May 1st. At 7 P.M. on that day he complained of feeling sick, coldness, and oppression at the chest. On Sunday he stayed in bed. On Monday he had frequent vomiting, and from that time till death had repeated attacks of coldness and profuse perspiration, with increasing cyanosis. The mind was clear to within one hour and a half of death, when convulsions set in and lasted an hour. He died at 8 P.M. on May 5th, the entire duration of the attack being four days and of the definite symptoms two days. The post-mortem revealed much serous effusion in both pleuræ, without any signs of inflammation; pulmonary collapse; great enlargement of the bronchial glands, some of which contained blood-clot; some ecchymosis at base of heart and in valves; other organs natural. Blood taken from the body fifty hours after death and received after five days contained numerous motionless rods, many containing spores and other larger filaments; only a few ordinary bacteria. Inoculation with this fluid did not produce anthrax.

CASE 2.—A man, seventy-one years old, who had been washing wool, including Van mohair, till May 15th. On the morning of the 17th he felt unwell; on the 18th he had pain in the chest and abdomen, and felt cold. On the 19th there was vomiting, purging, great prostration, and some cyanosis; on the 20th increased cyanosis, great dyspnœa, and râles all over the chest, and he died early on the 21st. At the post-mortem examination, twenty-eight hours after death, there was marked decomposition and subcutaneous emphysema, and abundant gelatinous œdema in the mediastinal tissues, large quantities of fluid in the pleura, and œdema and some congestion of the lungs. The bronchial glands were greatly swollen and congested, blood-stained frothy mucus in the trachea and bronchi; also some injection of the peritoneum, swollen gelatinous œdema of mesentery, with swelling and congestion of the mesenteric and retro-peritoneal glands. Spleen enlarged, soft, and dark-coloured. Fluids from this case were received by Dr. Greenfield fifty hours after death. The blood from the spleen contained many rods, the larger ones blunt at the ends, and containing spores resembling those of bacillus anthracis. No bacterium termo. The pleural serum and fluid from the lungs contained very long rods containing spores. Inoculation with these fluids was without result.

CASE 3.—A woolsorter, thirty years of age, who had been sorting Cape mohair, was taken ill on May 18th, and died on May 27th, having had symptoms resembling those of subacute pneumonia. On post-mortem examination, twenty-three hours after death, pus was found encapsuled in the right pleural cavity; minute purulent spots, surrounded by congestion, scattered through both lungs; the bronchial glands swollen, softened, and infiltrated with blood; spleen enlarged, very soft; some hæmorrhage around one kidney; no bacilli found in the blood, only a few bacterium termo, but some bacilli in the pericardial serum and spleen; no result from inoculation experiments.

GROUP B. *Cases in which anthracoid nature was proved by the microscope and by inoculations.*

CASE 4.—A wool buyer, thirty-six years of age, who had not been known to be exposed to contagion from any of the ordinary wools; after about a week of malaise he left work on May 29th, and on the 30th was seized with illness, chiefly severe headache and dyspnœa. These continued and increased on the 31st and June 1st and 2nd, on the morning of which day the headache became more intense, and extended down the neck and back. He became unconscious and died at 4.30 A.M. on the 3rd after three days and a half illness. Post-mortem examination nine hours after death; numerous petechiæ on abdomen and chest; extensive hæmorrhages into the mediastinal tissues and epicardium, and some wedge-shaped hæmorrhages at the surfaces of the lungs. More than two pints of clear serum in each pleura. Hæmorrhage and inflammatory œdema around pharynx. Extensive extravasation of blood in pia mater. The fluids were received and examined thirty-six hours after death. No bacilli found in pleural or pericardial serum or in spleen; but in the blood a few very long bacilli. Inoculation successful, and practised on two heifers, one protected, the other not (see Lecture I.); and also of guinea-pig and mouse, producing most typical anthrax.

CASE 5.—A man employed in sorting inferior mohair which had been roughly washed. For four days before definite symptoms he had complained of feeling chilly and of aching in the limbs; but it was not till midday on July 22nd that he came home from work feeling thoroughly cold. Towards night he was very restless, with dyspnœa, profuse perspiration, and some cyanosis. He died next day at noon. An examination nine hours after death revealed extensive semi-gelatinous infiltration of the mediastinal tissues, large serous effusions in both pleuræ, and semi-gelatinous œdema of subpleural tissue. Bronchial glands swollen, soft, with ecchymosis in and around them. Small submucous hæmorrhages in the trachea and larger bronchi, which contained frothy blood-stained mucus. Blood received twenty hours after death contained a few typical anthrax bacilli; and inoculation of a guinea-pig produced death in thirty hours with typical anthrax. Similar results from blood from heart and spleen, and the juice expressed from a bronchial gland; and some very large bacilli in the pleural serum.

CASE 6.—That of a man thirty-nine years old, who had been sorting white Van mohair. On August 23th, feeling pain in his head, returned from work in the morning, but took a good dinner. Next morning he stayed in bed. There was some uneasiness in abdomen and free perspiration, and towards morning some dyspnœa. He got up next day to go to work, but the dyspnœa increased, together with a sense of prostration and coldness. At 9A.M., respiration 46, pulse 120, very weak and intermittent; temperature 98°. Extremities cold and livid; profuse perspiration. Dulness at bases of lungs. He died at 2 P.M. of the same day.

Autopsy twenty-six hours after death.—The neck appeared swollen. There was emphysema of the areolar tissue in the anterior mediastinum, extending to the subperitoneal tissue of the abdominal wall; over pericardium some gelatinous exudation. Each pleura contained about four pints of serous fluid. Heart healthy; lungs collapsed but healthy. Bronchial glands greatly swollen, and the seat of extravasated blood. The fluids were examined forty-eight hours after death. In that from lungs were numerous bacilli in various stages of growth, and in the spleen, and guinea-pigs inoculated from each of these sources died in forty and sixty-six hours respectively, with greatly swollen spleen, containing abundant bacilli.

Thus out of eleven cases in all, either of malignant pustule or of supposed internal anthrax, six of which were fatal, experiments were made with nine, and in four only were any

results obtained by inoculation of rodent animals. Yet in all the fatal cases microscopical examination revealed the presence of bacilli in one or more of the fluids or tissues of the body. The apparent discrepancy is explained when the length of time which elapsed between death and the inoculation experiments is considered; for when decomposition has already set in before the post-mortem is made, it is exceptional to produce results by inoculation with blood or other fluids. In all these cases in which the body was examined soon after death, the inoculation was successful, and hence it was in the later cases that these results were obtained.

SYPHILIS AND LOCOMOTOR ATAXY.

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MUCH attention has been lately directed to the existence of a causal relationship between syphilis and locomotor ataxy, and, in Germany especially, facts have been marshaled on each side of the discussion.

The occasional obtrusive association of the two diseases did not escape the keen eye of Duchenne, and his allusion to the subject, in his original papers on the disease, is worth quotation. "Some [ataxic] patients had suffered from constitutional syphilis; it was the only reasonable or apparent cause of the ataxy, but the causal relation is uncertain, for, apart from the special symptoms of syphilis, at its different periods, the locomotor ataxy presented, in these patients, no new or special symptoms, and specific treatment, as a criterion, was equally useless."[1]

No subsequent writer, with the exception of Schultze,[2] attached any importance to the association until in 1876 Fournier[3] insisted on its frequency. His experience that syphilis preceded ataxy in twenty-four out of thirty cases which had come under his notice was generally regarded as due to the special character of his practice. So also with an assertion of the frequent relationship of the two, made in this country by Dryadale. Vulpian, however, to whose sphere of observation the objection does not apply, stated in his lectures,[4] published in May, 1879, that "there are actually few patients with locomotor ataxy who have not had, some years before the appearance of the first symptoms of this affection, an infecting chancre and secondary syphilitic accidents. . . . . I do not think that it is an exaggeration to say that of twenty patients attacked with locomotor ataxy there are at least fifteen who are old syphilitic subjects." Attention has been specially drawn to the subject by a paper by Erb, published in July, 1879,[5] in which he stated that of forty-four cases observed consecutively, there was a history of antecedent syphilis in twenty-seven, or 61 per cent.

Statistics of a different character have been brought forward by German authorities, whose opinions are entitled to great weight. Westphal,[6] of seventy-five cases, found that 18½ per cent. had had primary sores only, and another 14½ per cent. had had secondary symptoms. E. Remak[7] found a history of syphilis in only one quarter of fifty-two cases, and Bernhardt[8] in the same proportion of thirty-seven cases.

The facts which have come under my own notice corroborate the statements of Fournier, Vulpian, and Erb. In 1878, in a paper read at the Bath meeting of the British Medical Association,[9] I expressed the opinion that syphilis must be regarded as a cause of locomotor ataxy in one-half of the cases of that disease; and I now propose to bring forward some evidence in support of this assertion. Thirty-three cases of the disease in men have come under my notice since I began to investigate carefully the relation to it of syphilis. My earlier notes include many instances in which syphilis preceded ataxy, but these have been rejected because in other cases observed at the same time the point was not noted. The thirty-three cases are thus unselected, the only cases rejected being some in which the ataxy was apparently secondary to an acute myelitis.

Of the thirty-three cases eighteen presented a clear history of constitutional syphilis, fifteen described both primary sore and secondary symptoms, three presented or described distinct secondary symptoms, although they were ignorant of having had a primary sore. Five other patients had had a sore, but no secondary symptoms could be ascertained. In the remaining ten cases there was no history of a sore or constitutional symptoms. One of these, however, had had a rash which he was sure was syphilitic, but he was told by a medical man that it was not. Of these ten patients five had suffered from gonorrhœa. Thus, of the whole thirty-three cases, twenty-three (about 70 per cent.) had suffered either from a primary sore or secondary symptoms, and in 53 per cent. there had been undoubted constitutional symptoms, of which in several the indications were still present.

The significance of these facts depends on the proportion of the male population of this country who have had primary sores or constitutional syphilis. Before assuming a causal relationship in these cases between the antecedent venereal disease and the subsequent locomotor ataxy we ought to deduct from the coincidences that proportion which the prevalence of venereal disease may have rendered accidental. Unfortunately, we have not the necessary information. But it is probable that the proportion of adult males, over twenty-five, who have had venereal sores or symptoms of constitutional syphilis is much smaller among the middle classes than among the poor. It is therefore of interest to inquire whether syphilis precedes ataxy with equal frequency in the two classes. Of the thirty-three cases twenty-one were seen in hospital practice, and twelve in private. Of the former there was a history of constitutional syphilis in ten, and of a venereal sore alone in five, making a total of two-thirds of the hospital cases. Of the twelve cases seen in private there was a history of secondary syphilis in eight, and of a venereal sore alone in one, a total of three-quarters of the cases. These facts suggest that syphilis is an antecedent of ataxy, at least as frequently in the well-to-do classes as among the poor.

If we deduct 20 per cent. as explicable by accidental coincidence, there will still remain 50 per cent. of the cases of ataxy in which we must regard the antecedent syphilis as the essential cause of the disease. It may not have been the only cause of the disease; sex, for instance, doubtless has an influence, but the teaching of these facts, as far as they go, is, that one-half of the patients with ataxy would not have this disease if they had not, at some previous period, suffered from syphilis.

How is this conclusion to be reconciled with the figures of Westphal, Bernhardt, and Remak? These facts were published soon after, and in contravention of the statements of Erb, and were manifestly based upon old notes of cases. Statistics so obtained are, it is well known, of very doubtful value upon many points, and, according to my own personal experience, upon this point for one. Erb himself affords an illustration of the change of opinion which may occur when attention is specially directed to a question. In his article in "Ziemssen's Cyclopædia" (written apparently in 1876), he said: "Among chronic diseases, syphilis has been often credited with being the cause of tabes, with what justice cannot as yet be determined. ..... Judging by my own experience this connexion seems doubtful."[10] His changed opinion in 1879 I have already stated.

In women it will probably be found that the proportion of cases presenting syphilitic antecedents is much smaller. Such is the experience of Erb and Westphal, and with it my own observation agrees, although my cases are too few to justify a confident statement.[11]

The lesion in locomotor ataxy is, however, very different from those which are ordinarily caused by syphilis. It is a degeneration limited to a system of structure, and contrasts with the random distribution of ordinary syphilitic processes. This objection has been urged with force by Broadbent, Julliard, Westphal, and others, and I can corroborate the statement of Westphal that in cases which succeed syphilis the lesion is precisely similar to that found in other

[1] Arch. Gén. de Méd., sér. v., tome xiii., 1859, p. 439.
[2] Inaug. Diss., Berlin, 1867.
[3] Gazette Médicale de Paris, No. 52, 1876.
[4] Leçons sur les Maladies du Système Nerveux, p. 245, 1879.
[5] Deut. Arch. f. klin. Med., Bd. xxiv., p. 42.
[6] Berlin. klin. Wochenschrift, 1880, Nos. 10 and 11. [7] Ibid. [8] Ibid.
[9] Syphilitic Neuroses, Brit. Med. Journ., Aug. 31, 1878, p. 313, and March 1, 1879, p. 309.

[10] Ziemssen's Cyclopædia, American translation, vol. xiii. (1876), p. 528.
[11] Westphal's 75 cases included 20 women, in none of whom was there a history of syphilis. If these 20 cases are deducted, the proportion of the 55 men who had had secondary symptoms rises to 20, and a chancre only, to 25 per cent., making a total of 45 per cent.

cases. But theoretical considerations of this character must yield to facts. We know too little of any morbid agency thus to limit its possible operation to certain forms of effect, with which we happen to be familiar. Indeed, a study of the morbid changes which are universally admitted to be syphilis might make us hesitate in exclusions. In the falling off of the hair after syphilis we have a change which no one hesitates to ascribe to syphilis, but which is very unlike its other consequences, and might almost be described as a true "degeneration of a system of structure."

The common failure of anti-syphilitic treatment in ataxic cases, which Duchenne pointed out, has been confirmed by most subsequent writers, with the exception of Fournier. It is, however, not altogether surprising, when we remember how different in character the lesion is from those which are commonly influenced by iodide and mercury. The failure of the therapeutic test cannot be held as invalidating other adequate evidence as to the causal relation of the two diseases. But although, as a rule, anti-syphilitic remedies have no marked influence on the disease, occasional exceptions are met with, and I have seen one case of early ataxy in which iodide and mercury effected a practical cure.

As a rule, the interval between the syphilis and the first symptom of the ataxy is considerable. It was noted by Erb in only 17 cases. In 5 it was between two and five years, in 8 between six and ten, in 4 between eleven and fourteen. In my own cases the exact interval was noted in 18 cases. The interval is, as a rule, longer than in Erb's cases. No case of simple tabes was met with earlier than seven years after infection, the actual numbers being: at seven years, 1; at nine, 3; at ten, 2; at thirteen, 3; at fourteen, 2; at fifteen, 1; at seventeen, 1; at twenty, 3; at twenty-one, 1; at twenty-five, 1. Thus two-thirds of the cases occurred more than ten years after the primary disease.

Some other degenerative diseases of the nervous system may be found to stand in a similar relation to syphilis. All Hutchinson's cases of "ophthalmoplegia externa,"[13] for instance, occurred after syphilis, although in the patient whose brain I examined the lesion was purely degenerative. Reflex iridoplegia, the loss of reflex action to light, with preservation of the associated action on accommodation, so common in ataxy, I have several times seen in syphilitic subjects without disease of the spinal cord, and Erb has described an example of the coincidence. Indeed, I believe that it may be taken as a practical rule that (apart from general paralysis of the insane) reflex iridoplegia always indicates either syphilis or tabes, and that it not unfrequently indicates both.

Other forms of degenerative disease of the spinal cord, which occasionally follow syphilis, may also have a causal relation to it. It seems that one effect of constitutional syphilis may be to induce a neuropathic state in which certain degenerative diseases of the nervous system readily occur.

Queen Anne-street, W.

CASE OF CEREBRAL ABSCESS.

BY EDWARD SEATON, M.D. LOND., M.R.C.P.,
PHYSICIAN TO THE GENERAL DISPENSARY, NOTTINGHAM.

ON Wednesday, Aug. 25th, 1880, I saw for the first time, in consultation with Dr. Massey, senior surgeon to the Dispensary, a boy named John B——, aged sixteen, the son of a groom residing in a poor part of the town. At the time of my visit he was lying on his back in bed, with his head thrown back on the pillow and his legs drawn up. His face wore an expression of suffering, he was troubled with severe frontal headache, and when touched or moved at all he cried out with pain, "Oh, my head!" The intellect was clear, and there were no other head symptoms. The skin felt harsh and dry, the temperature in the axilla was 100·2°; the pulse was remarkably slow, only 56 in the minute, full and at the same time easily compressible; the tongue was slightly furred, the bowels constipated, and there had been vomiting. I examined the chest with some difficulty, owing to the pain caused by moving him, and ascertained that in front there was some dulness on the right side; no crepitation, but the breath sounds were harsh and the expiration prolonged; behind the dulness on the right side was specially marked at the base. The urine was not examined.

The following day we saw him again. The pain in the head was even more acute and incessant, otherwise his condition was about the same. The pain was constant, always referred to the frontal region. The intellect was quite clear; he was able to read books and answer questions; beyond a sluggishness of the pupils to light there was nothing to indicate any impairment of function in the cranial nerves. He was able to take his food, and there had been no vomiting since our last visit. The pulse was still very slow. The position of the head was most remarkable, thrown back on the spine as in tetanus, and on making an examination we discovered that he was actually resting on the occiput and sacrum, and that the hand could be easily passed under the arch of the spine. On calling that evening to take his temperature, I found this opisthotonos even more marked; it was constant, and entirely unaccompanied by convulsive attacks or other tetanic symptoms.

On the next day his condition was about the same, and it being quite impracticable to have him properly nursed at his own home, it was considered desirable he should be moved into the General Hospital. This was accordingly done the same afternoon. His death took place on the next day, Saturday, August 28th.

Mr. Anderson, the resident surgeon of the hospital, has kindly furnished me with the following notes of the post-mortem examination:—On removing the skull-cap slight congestion of the membranes was noticed, and when the brain was removed a distinct swelling was observed on the under-surface of the right temporo-sphenoidal lobe, which had been noticed when removing this lobe from the middle fossa. Fluctuation could be very distinctly felt at this spot. On making a section, an abscess was found, which contained about an ounce of thick creamy pus. It had burst internally into the right lateral ventricle, which was also found filled with pus. The brain-substance around was so softened as to be diffluent, and in the neighbourhood were some small red spots from extravasated blood. The abscess had not given way in any other direction. The membranes at the base of the skull were normal; there was no disease whatever of the petrous bone, or any of the other cranial bones. There was nothing abnormal about the heart. A number of pleuritic adhesions were found on the right side of the chest. There was congestion of both lungs at the base; otherwise the organs appeared healthy. The liver, spleen, kidneys, and intestines were all normal.

The above is a brief account of the case as it came under my notice. I will now proceed to give such facts relating to its history as I have been able to ascertain after careful inquiry, together with a few observations on the points which appear to me most striking.

J. B——'s father and mother are living and well; his eldest sister died at the age of nine; he has one other sister and a brother living, both of whom are in good health. He had measles when a child, and is said to have had an attack of modified small-pox about seven years ago, but he showed no marks of it. He never had scarlet fever or any other illness, nor did he at any time in his life suffer from earache or discharge from the ear. Until a little more than a twelvemonth back he may be said to have enjoyed very good health. He was a bright and diligent scholar, and his attendance at school was never interfered with by illness. At that time his health began to fail. Some three or four months before he had entered upon a situation as stable-boy in a gentleman's house at Sneinton, near Nottingham, and after a little while they noticed that he was disinclined for work, low-spirited, given to sleepiness, and that he frequently complained of headache; his appetite also was poor. It was supposed, however, that these symptoms were attributable to his having overgrown his strength, and as his work was by no means of an arduous nature, and his mistress took a very kind interest in him, he was allowed to continue his employment, and, in fact, remained in the situation until three months before his death. There is no account of his having been laid up with any chest affection, but his aunt, with whom he lodged, says that last autumn he complained a good deal of his chest being tender and that his breath was short. During the time he was in service as stable-boy there is no hint of his having received any blow on the head, though I have questioned everyone who had to do with him closely on the subject. Previous to this he was under the observation of his father, who says most positively that he never

[13] Med. Chir. Trans., 1879, p. 827.

suffered from any accident except a very slight one four years ago. The details of this he gave me. The boy was in a cart on his knees, leaning against the back board; it gave way and he fell with it, but saved himself from tumbling out by catching at the side. He was struck in the mouth and cut his lip, but there could have been no loss of consciousness, even of the most temporary kind, as after washing his face he went on as before. It would be unnecessary to mention this apparently trifling circumstance except to show the extreme improbability of his ever having received a blow on the head sufficient to produce concussion. It has already been said that he never had any earache or discharge from the ear; it should be also mentioned that he never had a whitlow, glandular suppuration, or abscess of any kind.

So much for the previous history. Coming now to the circumstances of his illness, which terminated fatally on August 28th, the onset of the more serious symptoms may be said to have dated from the beginning of June. He had been ailing before in the way above described and doing but little work, but now the headache became more constant and severe, and he had to lay up a good deal, though he was not altogether absent from work. The pain in the head was chiefly through the temples; he was attacked with giddiness occasionally, but he does not seem to have had any fit or loss of consciousness; drowsiness was also a prominent symptom, and there was a good deal of difficulty in arousing him from sleep.

On July 15th (six weeks before his death) he had very decided rigors, so marked that his mistress thought he was suffering from the ague. Very shortly after this he was sent to the Convalescent Home at Mablethorpe, in Lincolnshire; and whilst there Mr. Campbell, the medical officer to that institution, informs me that he was very apathetic, suffered severely from headache, accompanied by constipation and occasional vomiting, the sickness always being checked as soon as the bowels were cleared out. He returned from there to his father's home in Nottingham on Thursday, Aug. 19th. It is noteworthy that he made this long and fatiguing journey alone, and that at the end of it he was able to walk part of the way from the station, a distance of about half a mile. Greatly fatigued, however, with the exertion, he stayed in the whole of the next day (Friday). On Saturday he felt better, went out a little way, and spent some time talking to a friend in the market-place. On the Sunday evening, while sitting at tea, there was a sudden accession of pain to the head which obliged him to take to his bed, and which remained constant until death took place with the symptoms detailed above.

There are several features of interest in this case both from a pathological and clinical point of view. In the first place, there seems to have been no adequate cause for the abscess; no affection of the internal ear, no fracture of the skull, no thrombosis or diseased condition of the dura mater of the sinuses, no concussion (at least, no evidence of such), no pyæmia or suppuration in other parts of the body. Unless, indeed, the pleurisy, from which he appears to have suffered about a year before, may have had some connexion with the formation of the abscess (a thing difficult to conceive), here is a case in which, to say the least, there is no assignable cause. If there be such a thing as idiopathic cerebral abscess, this surely is one! Then, again, the absence of cyst wall, and the diffluence of the brain-substance around, clearly indicate that the abscess was of recent formation, while the occurrence of distinct rigors on July 15th would seem to point to that date as the period at which suppuration took place. If this be so, we must assume that the obscure head symptoms which had shown themselves for about nine months before the onset of the last illness, were not symptoms of the abscess, but simply evidence of the unhealthy condition of the brain-substance preceding its formation.

Clinically, the most remarkable feature of the case was the occurrence of opisthotonos—a symptom which is noted in only one of the cases tabulated by Sir William Gull and Dr. Sutton in "Reynolds's System of Medicine." In this, the sixty-second case, which is recorded by Dr. Ogle, there is said to have been "a slight attack of opisthotonos."

Nottingham.

A COTTAGE HOSPITAL was opened last week at Keith. The institution, the erection of which has cost about £1500, is to be known as the Turner Memorial Hospital, in memory of the late Dr. Turner, its originator.

ON SOME POINTS IN THE

PATHOLOGY AND TREATMENT OF ACUTE RHEUMATISM AND DIABETES.

BY P. W. LATHAM, M.A., M.D., F.R.C.P.,

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(Concluded from p. 48.)

HAVING suggested the common origin from which glucose and lactic acid may be derived, I will not here stop to consider how they produce their effects, but on the hypothesis that they result from an enfeebled action of the "coördinating chemical centre," proceed to consider whether any remedies can be administered which, combining chemically with their antecedents, will put a stop to their formation, and produce innocuous compounds which are speedily eliminated from the system.

There are two remedies which have a marked effect in lowering the temperature in pyrexia: quinine and salicylic acid. How do they act?

We know that quinine (1 part in 1000) will stop the amœboid movements of the white blood-corpuscles; it will check inflammation and the resulting out-wandering of these white blood-corpuscles.[1] If in the febrile stage, when the size of the red blood-corpuscles is diminished, quinine be administered, the globules resume their normal size.[2] This is due, however, to the fall of temperature, for the same thing occurs whenever the fever heat is lowered by the action of external cold.

If ozonised oil of turpentine be dropped into an alcoholic solution of guaiac resin, no alteration of colour occurs, but if a drop of blood be added, the blue appears at once—i. e., the blood acts as a carrier of ozone from the turpentine to the resin. Professor Binz has found that quinia, even in so small an amount as one part in twenty thousand, has a perceptible influence in preventing this. Similarly when into a dilute watery solution of the sulphate of indigo carbonate of sodium is thrown until the reaction is decidedly alkaline, and a little blood, and subsequently ten drops of ozonised turpentine are added, a green colour begins at once to develop, and in a little while passes into the clear yellow of isatin. In this case also the blood acts as a carrier of ozone, and Binz and his pupil Ransoné have found that quinia also inhibits this action, one part of it added to a thousand of the mixture delaying the change of colour for an hour. That the action of the alkaloid was on the blood, and not on the indigo and guaiac solutions, was shown by the fact that when similar solutions without the blood were shaken in the air and absorbed ozone, the characteristic colourations of its action were produced just as readily when quinia was absent as when it was present. Binz also proved that the red corpuscles were the portions of the blood affected.[3]

It would seem, then, that when quinia is administered internally it acts as an antipyretic simply by inhibiting the action of the red blood-corpuscles, and preventing the transference of ozone or oxygen by them from the lungs to the tissues. By its action in this way, it produces a great decrease in the elimination of uric acid and urea; it prevents therefore the oxidation of living sarcosine. After a thirty-eight-grain dose, Dr. G. Kerner[4] found the urea was diminished one-fourth, and the uric acid about four-fifths.

Quinia passes through the system unchanged, and is eliminated chiefly by the kidneys. Dr. L. Thau in three experiments out of 4·4586 grammes of the alkaloid given, recovered from the urine passed during forty-eight hours, 4·3 grammes, so that only 0·1586 gramme remained unaccounted for.[5]

By its presence therefore in the blood quinia may prevent the oxidation of the various normal or morbid products in the tissues, and so reduce the temperature, but it does not favour the elimination of those morbid products; they still exist in the tissues, and must be eliminated before the part is restored to a healthy condition. As an illustration of

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[1] Binz: Archiv für mikroscop. Anat., iii. 1867; Virchow's Archiv, Band xlvi., 1869, p. 133.

[2] Manassein: Ueber die Dimensionen der rothen der Blutkörperchen unter verschiedenen Verhältnissen. Berlin, 1872.

[3] See Wood's Therapeutics, 2nd edit., 1877, p. 64.

[4] Pflüger's Archiv für Physiologie, 1870.

[5] Wood's Therapeutics, p. 69.

this, I may mention that on two occasions I have seen attacks of gout developed whilst the patient was taking small doses of quinia as a tonic; in one case the patient actually predicting that as I had given him quinine, it would certainly induce an attack.

The action of bark differs in some respects from that of quinine. It has been found by clinical experience that in ague 200 grains of bark produce an effect equal to fifteen grains of quinine, that quantity of bark containing less than five grains of quinine. Is this due to the quinic acid which bark contains, the dry distillation of which produces either benzoic acid (Zwenger and Himmelman) or salicylous acid (Wöhler)?

The other remedy to which I have referred—namely, salicylic acid—when introduced into the system must enter into chemical combination with some of the constituents of the tissues. After its administration it appears in the urine partly as salicylic acid, but also as salicyluric acid; in the same way as hippuric acid, after the administration of benzoic acid, is found in the urine.

By combining one molecule of living sarcosine with two molecules of salicylic acid we obtain the elements of salicyluric acid, and oil of gaulteria or winter-green.

$$\underset{\text{Sarcosine.}}{C_3H_7NO_2}+2\underset{\text{Salicylic acid.}}{C_7H_6O_3}=\underset{\text{Salicyluric acid.}}{C_9H_9NO_4}+\underset{\text{Oil of wintergreen.}}{C_8H_8O_3}+H_2O$$

And oil of wintergreen, when acted upon by soda (in the blood), is resolved into sodium salicylate and methyl alcohol.

$$\underset{\text{Oil of wintergreen.}}{C_8H_8O_3}+\underset{\text{Soda.}}{NaHO}=\underset{\text{Sodium salicylate.}}{NaC_7H_5O_3}+\underset{\text{Methyl alcohol.}}{CH_4O}$$

This action, dependent upon the constitution of living sarcosine, may not be impossible, the salicyluric acid and sodium salicylate being eliminated by the kidneys, and the methyl alcohol inducing that diaphoresis and cerebral disturbance which are often associated with the administration of salicylic acid.

But the following hypothesis seems more reasonable. Salicylic acid when taken into the stomach will be absorbed, and pass directly by the portal vein into the liver. What will it meet with there? If we turn to the list of substances in Tables I. and II. about to be hydrated in the liver, we find at the end glycogen and either allanturic acid or alloxan. Alloxan, when acted upon by acids (HCl or H_2SO_4), is, we know, decomposed, the resulting products being alloxantin, oxalic acid, oxaluric acid, the last being transformed into oxalic acid and urea, and this last again into carbonic acid and ammonia. Taking, then, two molecules of glycogen and two of alloxan, we may have under the influence of salicylic acid—

$$\underset{\text{Glycogen.}}{2(C_6H_{10}O_5)}+\underset{\text{Alloxan.}}{2(CN)(NH_2)(C_3O_4)}+3H_2O$$

$$=\underset{\text{Carbonic ether.}}{(C_2H_5)_2CO_3}+\underset{\text{Cyanic ether.}}{2(C_2H_5O)(CN)}+\underset{\text{Oxaluric acid.}}{(NH_2)_2(C_3O_4)}+\underset{\text{Oxalic acid.}}{3C_2O_4H_2O}$$

Now, salicylic acid and salicyluric acid both decompose carbonates.

$$\therefore\underset{\text{Carbonic ether.}}{(C_2H_5)_2CO_3}+\underset{\text{Salicylic acid.}}{2C_7H_6O_3}=\underset{\text{Ethyl salicylic acid.}}{2(C_2H_5)C_7H_5O_3}+\underset{\text{Carbonic acid.}}{H_2CO_3}$$

And ethyl salicylic acid, when treated with soda, is decomposed into sodium salicylate and alcohol.

$$\underset{\text{Ethyl salicylic acid.}}{(C_2H_5)C_7H_5O_3}+\underset{\text{Soda.}}{NaHO}=\underset{\text{Alcohol.}}{C_2H_6O}+\underset{\text{Sodium salicylate.}}{C_7H_5NaO_3}$$

Cyanic ether is decomposed by water, assisted by an acid into alcohol and cyanic acid:

$$\underset{\text{Cyanic ether.}}{(C_2H_5O)(CN)}+H_2O=\underset{\text{Alcohol.}}{C_2H_6O}+\underset{\text{Cyanic acid.}}{CNHO}$$

Again:

$$\underset{\text{Alcohol.}}{C_2H_6O}+\underset{\text{Cyanic acid.}}{2CNHO}=\underset{\text{Allophanic ether.}}{C_2H_5(C_3H_3)N_2O_3}$$

And

$$\underset{\text{Allophanic ether.}}{C_2H_5(C_3H_3)N_2O_3}+\underset{\text{Salicylic acid.}}{2C_7H_6O_3}=\underset{\text{Salicyluric acid.}}{2C_9H_9NO_4}+\underset{\text{Water.}}{H_2O}$$

Consequently, according to these formulæ glycogen and alloxan combine to form carbonic and cyanic ethers, urea, and carbonic acid. The carbonic ether is then transformed into salicylic ether, which, passing into the blood, is decomposed into alcohol and sodium salicylate. The cyanic ether is transformed into alcohol and allophanic ether, the last (or it may be some compound metameric with it, and bearing the same relation to it that the isocyanates bear to the cyanates) combining with salicylic acid to form salicyluric acid and water. Consequently, from four equivalents of salicylic acid we have three equivalents of alcohol set free in the blood, and to this, in some measure at least, must be due the diaphoresis and cerebral disturbance. The sodium salicylate and salicyluric acid pass off in the urine.

These formulæ will explain the difference of the action of salicylic acid in diabetes and in acute rheumatism. Alloxan is the first necessary factor, and in acute rheumatism, as there is increased oxidation going on in the muscular tissue, abundance of alloxan is formed. This, decomposed by the salicylic acid, converts the glycogen into the ethers, which are then eliminated as salicyluric acid, and the formation of glucose and lactic acid is prevented.

If in diabetes the coördinating chemical centre is only weakened to such an extent that, though glucose appears in the blood, alloxan is still formed and appears in the liver, salicylic acid will combine with it, decompose the glycogen, and so prevent the formation of sugar. But if the centre is further weakened, so that $(CN)(NH_2)(CO)_2$ the antecedent of alloxan in the muscular tissue is decomposed in the tissue, forming other products, such as oxamide, urea, &c., which escape into the blood, then the salicylic acid alone can no longer decompose the glycogen, and the amount of sugar eliminated from the system would be unaffected by this remedy. In diabetes, therefore, dependent upon organic change in the nervous system, and of some considerable standing, little benefit would probably result from salicylic acid administered alone. A diet rich in nitrogen must be given, in order to produce excess of uric acid, which, oxidised perhaps in the blood, would then furnish the requisite material for the salicylic acid to act upon—

$$\underset{\text{Uric acid.}}{(CN)_2(NH_2)_2(CO)_2}+O=\underset{\text{Cyanamide.}}{(CN)(NH_2)}+\underset{\text{Alloxan.}}{(CN)(NH_2)C_2O_4}$$

Caffein in such cases may theoretically be worth a trial in combination with salicylic acid, since with hydrochloric acid and chlorate of potassium it is converted into alloxan.

If alloxan is formed in sufficient quantity to combine with the glycogen and prevent the formation of glucose, oxalic acid would be formed and appear in the urine; and as regards this, I may mention that in the case of a patient who came under my care in Addenbrooke's Hospital many years ago, suffering from diabetes, and who recovered under a restricted diet, I noticed that whenever his symptoms were improving oxalates appeared in his urine, but disappeared when the sugar increased. I then thought their presence due to the oxidation of the glucose, but the above formula shows that this is only partially the case. The fact appears to have some clinical significance.

As regards the appearance of uric acid and urates in the urine, it may, I think, be shown that if the disintegration of the muscular be in excess of that of the nervous tissue, uric acid will be formed in excess and pass into the blood. If the contrary condition exists there will be excess of some of the biliary secretions and of phosphates in the urine, but this must form the subject of further investigation. Salicylic acid, then, in acute rheumatism and in diabetes enters into chemical combination with the antecedents of lactic acid and of glucose, and so prevents their formation; and in acute rheumatism, by preventing the formation of lactic acid, there is no longer that dilatation of the minute arteries and consequent hyperoxidation of the muscular tissue, producing pyrexia and increased formation of urates, which are accompaniments of the disease. But to effect this purpose the dose in this disorder must be large enough to produce some decided effect upon the system, such as copious diaphoresis, noises in the ears, or difficulty of hearing, and put a stop to the formation of lactic acid. Salicylic acid that has once passed through the portal system has probably comparatively little effect after it gets into the general circulation. Why this is the case does not seem very clear, but in experiments that have been made with benzoic acid, it was found that when the substance was injected into the circulation alone it appeared as such in the urine, and not as hippuric acid. When two grammes of benzoic acid and 30 cc. of bile (which contains glycocine) were injected into the blood of a dog or cat the urine was found to contain a considerable quantity of hippuric but no benzoic acid; with a larger proportion of benzoic acid the excess passed into the urine together with the hippuric acid.[6] Simultaneously with the appearance of the physiological effects will come relief to the joints and muscles. The dose necessary to effect this is rarely less than

[6] Kühne and Hallwack's Jaresbericht, 1859, p. 608.

60 or 70 grains, it may be 100, 120, or more. The plan I adopt is to give the true salicylic acid in hourly doses of 20 grains until 60 grains have been taken, and then 10 or 20 grains every hour, watching its effect until the symptoms are relieved, and the patient's joints can be moved without pain. I give it in the form of pills (20 grains mixed with a little pulvis acaciæ and glycerine can be made up into six hard pills). And during the last four years, though I have given it to patients with all forms of heart disease, I have never seen any bad results follow its administration. Given in the form of pill it is, perhaps, absorbed less quickly, but more uniformly, into the circulation. But I have been careful not to use the artificial salicylic acid. This is made by passing carbonic acid into carbolic acid, and is therefore, unless very carefully prepared, liable to contain carbolic acid. "When six or eight grains of carbolic acid are taken in a wineglassful of water a sense of numbness is felt on the lips and in the mouth, followed by a sensation of coolness. Then if the stomach is empty slight nausea and an uneasy sensation in the abdomen follow, with vertigo, ringing in the ears, and slight deafness. The pulse falls in frequency and force, as does also the cardiac impulse, and diarrhœa sometimes occurs."[7] Similar effects to these have been ascribed to the use of salicylic acid, but, I believe, unfairly.

Whilst the remedy appears to relieve and cure acute rheumatism, it is an unquestionable fact that relapses are extremely liable to occur. These, I think, are explained by the supposition that whilst the formation of the *materies morbi* is prevented, owing to the decomposition of its antecedents, by the remedy; this has no effect in improving or restoring the tone of the "coördinating chemical centre," and in a short time, if the remedy be discontinued, the morbid products are again formed. But give the remedy in much smaller doses two or three times a day until the "centre" has recovered its tone, and then relapses need no longer be feared.

In diabetes large doses of the remedy have been given, but in favourable cases I have found one or two doses of twenty grains reduce the amount of urine one-half in twenty-four hours without raising the specific gravity, the diet remaining unchanged. I give this quantity twice a day, and a third dose at bedtime if the remedy produces no fulness at the back of the head nor buzzing in the ears, and allow the patients plenty of meat, tea, or coffee, and a moderate amount of wheaten bread and milk.

In pyæmia, typhoid fever, or other zymotic disease, where the poison is acting on the blood itself as well as affecting the various nervous centres, salicylic acid (if the theory I have advanced be approximately true) can have comparatively little beneficial effect.

Cambridge.

IVORY EXOSTOSIS IN BOTH EARS SUCCESSFULLY REMOVED BY OPERATION.

By GEORGE P. FIELD, M.R.C.S.,
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(Concluded from page 46.)

THE next case I have to mention is one of true ivory exostosis in both ears, similar in almost every particular to the one I have published.[1] That patient, Dr. G. M——, can now, Oct. 1880, hear perfectly well in both ears, and has never had any trouble with his hearing for the three years since the operation. Moos of Heidelberg has recorded a somewhat similar case. In an excellent book published this year[2] the author, after stating that these growths do not return when removed (Rindfleisch), goes on to say "that the ivory exostoses of the skull, owing to their hardness, are generally excised with extreme difficulty by means of saw and chisel,[3] and the violence involves very great danger." This, I think, is self-evident. I hope in the next edition he will be able to mention the operation by means of the drill, of which the following is another example.

A. S——, aged thirty-one, a gentleman in good health, came to consult me, Dec. 1879, by the advice of Dr. Symes Thompson, complaining of severe deafness, attributable to a compact growth of bone filling up both ears. He stated that as long as he could remember he had suffered from ear-ache from time to time. In 1866, when a midshipman in the Royal Navy, he first observed he was becoming deaf, and began to suffer increasing pain in the ears, but does not remember ever having any discharge from them. He attributes his deafness to sea-bathing, and states that at times in hot climates he "almost lived in the water." In 1870 he came home from China and consulted various medical men for his deafness, whose general opinion seemed to be that he would "grow out of it." Year after year he gradually became more deaf, till at length his "ears almost closed up," and, thinking nothing could be done for them, he was compelled to retire from Her Majesty's service. On Dec. 16th, 1879, he placed himself under my care. Both ears were closed by a bony growth, which was found to be a large ivory exostosis, and in each ear they arose from the posterior wall of the external auditory meatus. He heard the watch only when in contact with the right ear and about two inches from the left. My colleague, Mr. Edmund Owen, saw the case with me the next day, and agreed in thinking that the only chance of his ever hearing fairly well again depended upon an operation for the removal of a portion of the bone. The case presented exactly similar features in almost every respect to the one I have already published. In each instance the disease was not hereditary, and there was no history of gout or syphilis; there was no pain, but a most distressing feeling of fulness and pressure in the ears was experienced, causing great discomfort and uneasiness, together with tinnitus aurium. The growth filled up both ears; the tumours arose from the posterior wall of the meatus; they were of ivory consistence, adamant-like growths of the petrous bone, and extended from about a quarter of an inch from the orifice to within a short distance of the tympanic membrane. I therefore decided to operate with the American dental engine. This instrument can be used with comparative safety even on a tumour thus awkwardly situated, but it can readily be understood that, from the narrowness of the canal and from the close relation of the brain and other important structures, great care is necessary. Mr. S—— postponed the operation for a month, in order, as he expressed it, "in case anything went wrong, that he might have a merry Christmas first."

On Jan. 29th the patient was placed under chloroform, and I proceeded to drill through the growth in the right ear. Here let me state that to perform the operation I have found that it is necessary to have the help of three assistants—one to give chloroform, one to work the treadle of the engine, and one to hold the steel guard in the ear, which I use to prevent as much as possible any risk from the slipping of the drill when in motion.[4] Help is required also to sponge and to syringe with cold water, to keep away the blood which fills up the meatus with great persistency, and often prevents, for a time, a view of the bone. I worked away steadily for fifty minutes, and at last succeeded in getting a fine drill through the growth. For the reasons before assigned, the greatest caution is necessary, and the operation would require considerable time, even if the part to be pierced proved to be less solid. On Feb. 11th I enlarged the opening, the patient being forty-five minutes under chloroform. On March 2nd I operated for fifty-five minutes on the left side in a similar way, and in this ear I found two subsequent operations necessary—one on March 24th, lasting forty minutes, and one on April 17th, half an hour.

I will describe as shortly as possible the operation. The patient is placed on a high couch four feet from the ground, with his head resting on a pillow, and the side to be operated on must be well propped up towards a good light. It is necessary to have the patient placed as high as this, as the dental engine is adapted to a high chair, and so consequently the drill will not reach anyone placed on an ordinary sofa. The handle of the drill or the holder of course might be made longer, but that would involve constant stooping on the part of the operator, which in such a long operation is best avoided by this high position of the patient. Chloroform is then administered, and an assistant holds a steel guard in position round the growth, the guard having been made beforehand to fit the exostosis. Messrs. Weiss and Son

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[7] Dr. Bill: Amer. Jour. of Med. Sci., July, 1872, p. 45.

[1] THE LANCET, July 20th, 1878.

[2] The Principles and Practice of Operative Surgery, by Stephen Smith, M.D., of New York.

[3] Heinecke of Erlangen has successfully operated by gouge and mallet; but in that case there were suppuration and granulations on the membrana tympani.

[4] Made by Weiss and Son, already described in THE LANCET, July 20th, 1878.

made me for my first operation, and which answered admirably, a soft metal guard of copper, very thin, and small enough to pass between the growth and the anterior wall of the meatus. In fitting it, I bend one end to the exact shape to pass behind the growth on the right side, and the other end to pass behind and exactly fit the left exostosis. When I have thus got the shape of both growths, a guard exactly corresponding to the softer metal is made of steel, which at the time of the operation can be readily placed in position, and prevents danger in no small degree. I generally begin with a small drill, and subsequently enlarge the opening with a larger instrument.

I have not found it necessary to cut through the skin first, before using the drill. I proceed at once to make a small hole by the side of the steel guard, avoiding the base of the tumour, as there is nothing to indicate the direction, and a slip would be attended with the utmost danger to the life of the patient. It must be remembered that very often the operator is working in the dark, for whatever means he may adopt blood will be sure to fill up the meatus. If he succeeds even in making a way through the base of the growth, he may find himself in a very unexpected and unenviable position. With the steel guard firmly fixed in place, I have found it best to work very slowly, constantly taking out the instrument to sponge or syringe away blood, and thus for an instant or so get a view of the bone. The operation, necessarily very tedious, is by no means an easy one, and even with much care and caution bestowed upon every detail, unforeseen *contretemps* may arise.

I have just stated that I consider the help of several assistants necessary; an accident occurred to impress this on my memory. In the last operation on the left ear one assistant was absent, and the consequence was I had to hold the guard and work the drill myself. Unfortunately, somehow or other, the guard slipped and I injured the membrana tympani, and set up slight facial paralysis. This facial paralysis, what did it mean? I at first thought I had touched the chorda tympani nerve, which is a branch of the facial; it winds forwards above the tendon of the tensor tympani, between the malleus and incus escapes through the Glasserian fissure, and descends to unite with the gustatory nerve, and terminate in the tongue. One or two cases have been related (see Burnett, p. 506) where irritation of the chorda tympani has been said to cause facial paralysis. In my case I may have touched the chorda tympani, but then it seems to me that the tongue alone would be affected, and not the muscles of the face. In my patient the mouth after the operation was drawn slightly over to the unaffected side. A sure sign of injury to the facial nerve. The patient confirmed this view by saying next day, "What I complain of most, doctor, is that I can't whistle." I feel sure that I must have touched the inner wall of the tympanum and the aqueduct of Fallopius, which covers the facial nerve, and wounded or slightly grazed the latter. And this was done when the guard slipped, notwithstanding I was working with the greatest care, proceeding very slowly and holding the drill so firmly that I thought it impossible I could go wrong, but an eighth of an inch was sufficient to pierce the membrana tympani and touch the opposite wall. Luckily, I had great power over the instrument; my arms ached from the constant and firm grip I had used in holding the drill. It was the least touch, and that was all, and I knew at once the mischief I had done.

I am happy to say that, by the help of galvanism and careful treatment, the patient recovered from the effects of the paralysis, and the perforation in the membrana tympani closed. The operation itself is one of extreme difficulty, and any serious complication in carrying it out adds largely to one's anxiety. The patient afterwards did remarkably well, and regained his hearing in both ears.

I think that in all communications of this kind every detail should be recorded and every mistake fairly acknowledged. Accidents, however careful the surgeon may be, must occur occasionally; if they are admitted unhesitatingly good may come, for it renders others less likely to fall into the same error.

In conclusion, I am thankful to be able to record a most satisfactory result.

Lower Seymour-street, W.

DR. JAMES WEAVER has, we regret to learn, been compelled by failing health to resign his appointment as medical officer of health to the Longton Corporation.

TREATMENT OF EMPYEMA BY IRRIGATION AND ASPIRATION.

BY W. W. MOXHAY, M.R.C.S. ENG.,
SURGEON TO THE ROYAL BERKS HOSPITAL.

I WISH to place on record a case of empyema treated by a combination of irrigation and aspiration, with perfect Listerian precautions, according to Fraentzel's description at page 717 of the fourth volume of Ziemessen's Cyclopædia. It may be that mine is the first so operated on in England, and Fraentzel himself only quotes eleven.

My patient, a boy aged eight, was operated on on July 16th. His pleura was washed out twice a day until Aug. 19th, then once a day to the 22nd, and on the 29th the wound was healed, and the lung had expanded well all over. The respiratory murmur came close to the ear on every portion of the surface of the chest on this (the left) side, and there was barely a quarter of an inch of difference in the measurement of the two sides. There had been no fetor all through. At first simple distilled water was used, then a weak solution of iodine, and latterly carbolic acid solution (two grains to the ounce). The fluid used was always of the temperature of 100° or 103° Fahr. By a Nélaton's tube, with several apertures, the fluid was let into the posterior part of the cavity of the pleura from a glass funnel somewhat raised above the level of the wound, which was near the mammillary line between the fifth and sixth ribs, and by another tube also going to the back of the cavity, and attached to a cross-acting syringe, the fluid was drawn out and discharged into a basin until cleared from all pus or lymph.

I should just like to remark that in trying to get up some statistics, I was foiled by the curious mixing together in various writings of cases of serous, fibrino-serous, and purulent effusions, under the heading of empyema. Should such things be?

This case was three miles from my house, and I never should have been able to carry out the details, which took up much time, without the kind and able assistance of Mr. B. Brookes of Sonning.

Reading.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tam aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium

WESTMINSTER HOSPITAL.

PNEUMONIA; EXTREME PROSTRATION, WITH LOSS OF CONSCIOUSNESS; CRISIS ON THE EIGHTH DAY, AND CONVALESCENCE ON THE TWELFTH; TREATMENT BY ALCOHOL; REMARKS.

(Under the care of Dr. STURGES.)

THE notes from which the following is abstracted were taken by Dr. Gristock, medical registrar.

William E——, aged twenty-five, warehouse porter, a stout muscular man, of temperate habits and good personal and family health, was admitted on Dec. 7th, 1880. For some six weeks he had been under treatment for enlarged tonsils, but his general health had not suffered, and he had kept at work as usual. On the evening of the 4th, and again on the 5th, he had had repeated rigors, together with cough, stitch in the right side, and difficult expectoration of hitherto uncoloured mucus. He had now kept his bed for three days. His aspect was depressed; respiration 34; temperature 104°; pulse 132, full and compressible; tongue moist and red. There was still severe pleural pain. The sputum was rust-coloured, viscid, and scanty. The base of the right lung yielded the usual consolidation signs, with as yet very limited area of percussion dulness;

moist râles were audible throughout both lungs. On the second day dulness at the right base, reaching upwards nearly to the lower angle of the scapula, together with ægophony and distant yet still distinctly tubular respiration indicated some pleural effusion on the affected side. The general condition was more depressed: there was still much pain from stitch, with absolute sleeplessness; respiration 44, temperature (midday) 104·6°, pulse 132, urine of sp. gr. 1024, containing distinct trace of albumen, with no marked deficiency of chlorides. There was great difficulty in getting the patient to take nourishment, excepting milk; beef-tea he altogether declined, and mutton broth was substituted. He was treated with ammonia salines, and, fomentations and poulticing failing to relieve the chest pain, five leeches were applied to the seat of it, followed by hot fomentation. By these means this particular symptom was in great measure removed. On the third day, however (being the fifth from the first rigor), the patient was notably worse. He had been restless and delirious during the night, utterly sleepless, and breaking into sweats. At the time of the visit the face was bluish; the lips and ears were distinctly cyanotic; signs of general bronchitis were still very distinct, the râles in places approaching the subcrepitant; pulse was 144, and respiration 44, temperature at midday 103·8°. It was now deemed necessary to give brandy, and during this day four ounces were taken. That night was restless and sleepless, like the others. Delirium was sufficiently active to make a special nurse requisite; the temperature, meanwhile, continued to fall, and this midnight (of Dec. 9th, or the fifth day) was 100°. He was now given bark and ammonia in place of the saline draught. Passing over the 10th (or sixth day of this disease), during which he continued in much the same state, still wholly without sleep, delirious, and with trace of albumen in urine, the 11th of December found him semi-conscious, passing urine in bed, much cyanosed, moving about restlessly, not answering, and hardly to be recalled to himself. The tongue was now dry, and sordes were collecting on the teeth. There was much sweating; the temperature was 101·8°; pulse 140; respiration 46, at the time of visit, but both pulse and breathing varied much from hour to hour at this period. In this extreme condition he was ordered half an ounce of brandy every half hour (thus taking twenty-four ounces of brandy during twenty-four hours). Directions were given that in case of increased difficulty, or rate of breathing threatening death by apnœa, he should be at once bled to from six to eight ounces. During the night of this seventh day this condition actually occurred, insomuch that preparations for bleeding were made. Owing, however, to the circumstance that the lancet is less accessible now than formerly, some delay arose, the urgency became less, and bleeding was not actually performed. On the 12th, the eighth and, as it presently appeared, the critical day of the pneumonia, the patient was delirious and irresponsive. Respiration was 34; pulse had fallen to 126; and temperature to 99·4° He still passed urine unconsciously, and the symptoms of typhoid sinking were hardly less; the physical signs had not changed. He had now been five days in hospital entirely without sleep; but on this afternoon, at the time of the visit, was observed to be drowsy. The half hour doses of brandy were thereupon suspended. He fell into his first sleep, and, as may truly be said of cases like his, awoke safe. The change was at once recognised in his aspect and manner, and even the precise hour of this critical change. On the 13th (the ninth day of illness) it was reported that he had had a quiet night, sleeping well; his pulse was 100; temperature 99·4°; respiration 26; urine free from albumen. He was rational, and drowsily answered questions. The next day redux crepitation was heard, and the tubular was exchanged for bronchial breathing. The bronchitic râles were now but partial, and over portions of both lungs respiration was free and natural. It was now obvious that the active stage of disease was over. All medical treatment, including brandy, was stopped by the 14th, and by the 16th, the twelfth day of illness, the man was convalescent, and almost all signs, whether of lung consolidation or bronchitis, had passed away. It was observed, however, that for several days longer the face remained somewhat dusky, and that what may perhaps be called without objection the severe shock of the disease was not recovered from with quite the same celerity which marks the return to health after a pneumonia of ordinary character. Still, on the seventeenth day from his first rigor, being the ninth from the extremest severity of his illness, the patient was up and about almost in his usual health.

Remarks by Dr. STURGES.—We have here an example of pneumonia of unusual severity, yet which in the end underwent its critical change with remarkable suddenness, eight days being occupied by the advance of the disease, and hardly four in reaching convalescence. Two points especially call for short notice—(1) The delay and the manner of crisis, with the sudden termination therewith of the bronchitis, no less than of the pneumonia; (2) the indications that the case afforded for prognosis and for treatment.

1. The area of lung consolidation was not large, nor did it notably spread. But the accompanying bronchitis was much more extensive than is usual in pneumonia, implicating both lungs, and reaching in places to the smallest tubes. Nevertheless, the onset, the course, and the termination of the affection were such as belong to pneumonia, and not such as belong to bronchitis. Especially was this shown by the fact that when the crisis came the lung recovered at once and altogether, the signs of bronchitis disappearing almost as soon as the signs of consolidation. It is true that we have bronchitis more or less in every pneumonia, and that the physical signs of the two are apt to disappear almost together; but in a case like the present, where bronchitis is exceptionally extensive, and in both lungs, while there is but a single patch of consolidation, there is room to question whether we have not a secondary or bronchial and not an idiopathic pneumonia; whether, in other words, we are not to expect a lengthened course and gradual changes such as bronchitis shows, rather than a limited course and sudden amendment such as pneumonia shows. In such circumstances a consideration of the origin and general features of the illness is all important. If in these respects the case conforms, as it did here, to the well-known pattern of true pneumonia then, however extensive the bronchitis, there is yet ground not only for expecting crisis at the usual period, but also for hoping that with this event the bronchial affection will disappear along with the pneumonic. *Bronchitis when coupled with pneumonia in this wise departs from its own rule of gradual recession, and conforms to that of its associate.*

The crisis was late—namely, on the eighth day,—and the fall of temperature was gradual: "a defervescence by lysis." According to some definitions, therefore, there was no crisis at all. The temperature on the morning of the eighth day, when the man was unconscious and threatening to die, was not appreciably lower than on the same evening when he awoke from his first sleep, and it became certain that he would live. For three days, indeed, the body heat had been falling, while all the most ominous symptoms—the prostration, the passing of urine unconsciously, the drying of the tongue and teeth—had been accumulating, and the physical signs had shown no change. We may get just such a fall of temperature when death is impending, and this might seem to be the case here; yet never was there a more sudden arrest of active symptoms. We could tell the very hour when the fever left him, and the transition from immediate present danger to the mere exhaustion of a past conflict was seen first in his face. It is most common, indeed, for the temperature to fall suddenly through several degrees at or about the time of crisis, but we see that this is not always so. *The temperature chart may sometimes give no indication at all of the most marked crisis.*

2. What should have been the prognosis in such a case as this, and how far was it influenced by the treatment? It happens sometimes that with just such general symptoms as those we have here there is not merely a patch of consolidation, but a whole lobe or more is solid; or, otherwise, that the consolidation is not towards the base but at an apex. In such cases, while we wait and hope for the crisis, we are fearing all the while that the actual condition of the lung may be one of rapid disintegration unrecognisable as yet by any physical sign. There is less room for such fear in a case like the present. Let the hepatisation be of small area, at the lower rather than the upper part of the lung, and not spreading, the illness new and sudden, and the patient temperate, of good general health, and not an infant or an old man, and however grave the general symptoms the natural tendency to recovery is so strong that we can hardly place a limit to it. Where else in disease is there anything like it? We are sometimes struck with the sudden termination of a specific fever, but there still remains the prolonged convalescence of such fever. Where but in

true pneumonia do we find a patient blue and gasping and insensible one week and well the next? Such being the nature of the disease, nothing can be more hazardous than the drawing of conclusions as to the results of treatment. The most we can say for certain is that pneumonia, on the whole, has fared better since we have ceased to treat it with remedies. Suppose this man had been bled at the time when bleeding was actually proposed, how admirable an example would he have seemed to furnish of the good of bleeding? And so of the alcohol. It is easy to attribute too much to it. Yet two things may, perhaps, be safely said under this heading. One, that in most cases of pneumonia of this gravity some substitute or other for food is urgently needed, since food itself, in whatever form, can no longer be taken; the other, that the stimulation of alcohol pushed just so far as to produce its earliest toxic effect of narcotising seems to meet the needs of a prostration happening on the very eve of crisis, and which is wakeful and actively delirious. At the same time the nature of this need for alcohol, liberally administered for a short period, in an emergency like this, whether as medicine or as the best substitute for food, would imply the needlessness of it in all cases of pneumonia where suitable nourishment can be given in sufficient quantity. It is quite certain that ordinary pneumonia recovers perfectly well without a drop of alcohol.

NEWARK HOSPITAL.

HYSTERICAL SPINAL AFFECTION OF TWO YEARS' DURATION; CURED BY CORRIGAN'S IRON.

FOR the following notes we are indebted to Mr. J. D. T. Reckitt, house-surgeon.

Alice D——, aged twenty-five, dressmaker and single, was first seen on May 20th, 1878, when she stated that until two years before, when she had a fall, spraining her back a little, she had always enjoyed good health. She was first attended at her home. She kept her bed, but had a healthy appearance, though the expression of her countenance was melancholic. She had been treated in the hospital, and had also been under treatment at home for what she stated was spinal disease, the treatment including blisters to the spine, various liniments, and, lastly, crutches; but all to no purpose. The nature of the case was suspected to be hysterical, and in answer to inquiries the patient said she had severe pains almost everywhere, not excepting even the ends of the finger-nails, and added to this, a sympathising mother dilated very largely upon the extreme suffering the patient underwent. She had not been able to walk for several months, but her appetite had continued pretty good. She slept badly, and had much headache. It was therefore determined to apply the actual cautery, and the patient was assured that she would be able to walk in two months' time.

On May 25th, assisted by Mr. J. Sheppard, Mr. Reckitt made six impressions—three on either side—in the spinal fossæ, from the commencement of the dorsal region downwards. The patient complained of considerable pain, and she nearly fainted. It was decided to reapply the iron in a week's time if there was no improvement.

On June 2nd she appeared so depressed and reluctant to have a reapplication, that it was deferred a week; and accordingly, a week later, six more impressions were made on either side, but below the former. She was ordered to get up.

On the 16th she felt a little better, but still had a little pain and slight headache. She was ordered to try to walk with help.

On the 23rd she said she was improving slowly. She was told that probably another application would be necessary.

On July 7th she was downstairs, and had walked several times with help.

On August 20th she presented herself at the hospital, having walked up a distance of half a mile with her sister's aid. Much better, and walked fairly.

On the 30th so much improved that she was discharged.

Remarks.—The apparent total inability of the girl to walk when first seen, and the rapid effect of the heroic measure adopted, would appear to prove that hysteria—or rather, perhaps, malingering in a hysterical subject—was the main feature in the case; and also that the treatment, though somewhat cruel, was the only means to make such an obstinate individual use her ambulatory powers, and to assure her of her ability to do so.

Medical Societies.

ROYAL MEDICAL & CHIRURGICAL SOCIETY.

A Series of 172 Antiseptic Abdominal Sections.—Radical Cure of Varicocele.

THE ordinary meeting of this Society was held on the 11th inst., J. E. Erichsen, Esq., F.R.S. President, in the chair. The subject of antiseptics as applied to peritoneal surgery—principally ovariotomy—was again under discussion, a paper by Mr. Knowsley Thornton being read; and Dr. Bantock took the opportunity of once more urging his objections to the "Listerian" method. A short description of a new method for the radical cure of varicocele, by Mr. Henry Lee, was also read.

Mr. KNOWSLEY THORNTON read a paper "On 172 Antiseptic Abdominal Sections, with remarks on the causes of death in the fatal cases," of which the following is an abstract. After some remarks as to the details given in the printed tables which accompanied the paper, the author pointed out certain further information which it is desirable should accompany statistical tables of operation cases. First: an account of all cases of abdominal tumours seen during the time covered by the tables, but not operated upon, with the reasons why no operation was performed. Second: the highest temperature and pulse, with the day of the operation upon which they were respectively recorded. Such additional information is necessary in order to show the success of the individual surgeon in dealing with ovarian or other similar disease, and the general progress in this branch of surgery, and also to show the well- or ill-doing of the cases which recover after operation. The fact that all the cases had been treated on Lister's method, and nearly all by the complete intra-peritoneal ligature, was dwelt upon. Common methods of treatment in a large series of cases being especially useful in extending knowledge by affording material for comparison with other methods, the importance of accurately following the teachings and practice of Lister, to the exclusion of so-called "modified Listerism," was insisted on. In the author's hands the *pure Listerism* had reduced the mortality in the most common operation in the tables—ovariotomy—from 23·94 per cent. to only 4 per cent., a result altogether beyond the mere improvement to be expected from increased experience in performing the operation. The question of drainage, by means of Keith's improved form of Koeberlé's glass tube, was then discussed, the small mortality in the last 75 ovariotomies (4 per cent.) being claimed as a proof that drainage is unnecessary if Lister's method be perfectly carried out in abdominal section, comparative statistics being given to prove the same conclusion. The question of selection of cases was alluded to in relation to two of the three deaths in the last series of 75 cases; both were apparently hopeless, but were given the last chance; and both, though open to question as to completion, were included among the complete operations. The question as to what cases should be called complete or incomplete was then discussed. A comparison of the mortality in simple and difficult cases (it is *nil* in the author's hands in the former), in the cases tapped and not tapped, and in those which had only one or both ovaries removed was also given. The causes of death in the fatal cases were then given in some detail, and the bearing of the antiseptic method on the mortality was illustrated by a division of these cases into *three* groups. The danger arising from the transfixion or opening of a diseased Fallopian tube was pointed out as a possible cause of septicæmia—a question also important in dealing with uterine fibroids. The incomplete ovariotomies and other operations in the tables were discussed, and, passing to the treatment of uterine tumours by abdominal section, the author pointed out the difficulties in the application of Lister's method to those cases in which the uterine cavity is

opened, and showed from his own statistics that, whereas in cases in which the cavity was not opened the mortality was only one in eight (and that one a very exceptional case in many respects), in cases in which the cavity was opened three out of four died. The general conclusions drawn from the whole 172 antiseptic cases were as follows: 1. Simple cases recover under Lister's method, with a certainty previously unknown. 2. There is less fever, and convalescence is more rapid, than under the old method. 3. The success obtained in the more complicated cases is in proportion to the exactness with which the antiseptic method can be applied to the individual cases. 4. The accidents and complications occasionally following operation, such as hæmorrhage, for example, are more easily overcome in aseptic cases. 5. There are difficulties and some dangers in the application of the method, and the more experience the individual surgeon has in it, the more readily he foresees and avoids these, and the more complete becomes his success in applying it. In a few concluding words the author pointed out how much peritoneal surgery owed to Mr. Lister, and how much more to Mr. Wells; without the untiring energy and success of the latter it would never have been in the position to benefit by the method of the former.—The PRESIDENT, in inviting discussion, drew attention to the introduction into this paper of the subject of removal of the uterus, which opened up a new field of inquiry into the claims of antiseptics, the views held on their merits and disadvantages in ovariotomy being almost irreconcilable.—Dr. BANTOCK began by referring to the debate which had taken place at the last meeting of the Society, and criticising the remarks made by Mr. Thornton on that occasion. He maintained that his own experience, though comparatively small, was sufficient to prove the inefficiency of Listerism. Mr. Thornton's reference to his (Dr. Bantock's) hospital statistics before they had been published was unusual, and if, instead of quoting the last year's figures, he had given those of the previous year, he would have found that the rate of mortality as between his cases and Mr. Thornton's was reversed. The opinion he held that carbolic acid was injurious was shared in by many, for some of the most eminent Continental surgeons had attributed fatal results to its use. In considering the subject of drainage it must be remembered that drainage is always applied to the most severe cases, and to say that in such cases death is due to the use of the drainage-tube is to beg the question. In his own practice the daily diminution of the discharge showed that the drainage-tube did not excite suppuration; and the specimens of fluid he showed on the last occasion proved this, for they were perfectly aseptic. He believed tapping to be most injurious, and would say that it should never be done unless the operator were prepared to follow up the procedure by removal of the cyst. It was harmful, not because of its liability to cause septic poisoning, but because of its leading to inflammatory changes in the cyst. He had removed a cyst (not previously tapped) where the fluid was putrid; the drainage-tube was used, and the temperature fell at once after the operation. He did not believe at all that septic matter could be introduced through tapping. That suppression of urine was more frequent since antiseptics had been used was shown by the fact that it was only once met with by Mr. Spencer Wells in 800 cases; and he himself (Dr. Bantock) never had a case of suppression until he adopted the Listerian method. Dr. Keith's statistics, showing a mortality of 1 in 26 without antiseptics and 1 in 24·5 with antiseptics, were significant. Dr. Bantock concluded by showing that the consumption of ice at the Samaritan Free Hospital had risen considerably since Mr. Thornton's introduction of the ice-cap and his employment of Listerism, and he thought this fact was opposed to Mr. Thornton's statement that there was less fever since the adoption of Listerism than before.—Mr. HULKE asked Mr. Thornton if he would state precisely what he meant by Lister's own method. Mr. Lister had, no doubt, greatly modified his method, and it would be satisfactory to know exactly the details as now carried out.—Mr. THORNTON said the procedure was as follows:—The abdomen is washed by the nurse before the operation with a 5 per cent. solution of carbolic acid, and a cloth soaked in this solution is lightly bandaged on until the operation begins. All the instruments, ligatures, &c., are placed in trays containing this solution, which is diluted with warm water to 2½ per cent. shortly before the operation. The strength of the solution in the spray bottle is also 5 per cent., which is diluted by the steam of the spray-producer to about 2½ per cent. The sponges (always well cleansed after each operation by ammonia and by sulphurous acid—1 in 8) are kept in a 5 per cent. solution, and during the operation are washed in warm water, and then in a 2½ per cent. solution. Gauze is applied directly over the wound, is strapped on, and not removed until ten days after the operation, by which time the wound will (in 99 cases out of 100) be found healed by the first intention, so that it is not necessary to use the spray in removing the ligatures. Gauze is again put on, and the patient goes out with the wound quite healed.—Mr. HEATH congratulated Mr. Thornton upon the plain way in which he had given the facts of all his operations—especially for including his uncompleted operations in his tables. But why were no cases given beyond June last? Ten years ago he held office at the Hospital for Women and performed and witnessed many ovariotomies. He had been pleased to find that Mr. Wells and his colleagues at the Samaritan Free Hospital had come round to the views which were then held at Soho-square—viz., that preliminary tapping was bad, and that ligature was the best method of treating the pedicle. The results they then had were very good. It was remarkable that in all Mr. Thornton's fatal cases there were adhesions; for this proved the truth that if the case be a simple one it does well. Ovariotomy might be compared with lithotomy, where, if the stone be a large one, the chances are against recovery. So in ovariotomy, if the cyst be very adherent, the chances of a fatal result are the same whether the case be treated by drainage or by antiseptics. Therefore he believed that as good results might be expected without the use of the spray as with it; and in his own experience the wounds healed readily; far different from the cases where the clamp was used, when patients used often to go out with the wound unhealed.—Dr. HEYWOOD SMITH, alluding to the removal of uterine fibroids, especially of the intramural class, when symptoms are more urgent, asked whether in such cases oöphorectomy should not be practised, as it seems to give some hope of the arrest of growth of such tumours. The introduction of antiseptics had certainly reduced mortality in cases of old vascular adhesions, which before the days of antiseptics were often a source of danger from the oozing of blood into the peritoneum.—Dr. CHAMPNEYS pointed out that statistical tables dealing only with ovariotomy were somewhat misleading, for they take no account of those cases which are passed over as unfit for operation, and which by rights should be placed on the side of the fatal cases. Every encouragement should be given to surgeons to operate in all doubtful cases, disregarding the influence this might have in raising the rates of mortality; for cases were met with in which after death it was seen that the tumour could easily have been removed.—Mr. THORNTON disclaimed any intention of entering into a repetition of the debate which took place at the last meeting. The statistics he then quoted from Dr. Bantock's practice had been mostly published by that gentleman in a letter to one of the medical journals. The apparently excessive consumption of ice, on which such stress had been laid, arose from the great waste due to the storage of ice at the Samaritan Free Hospital; and it was not found to be necessary to keep such a supply now, for the ice-cap was very rarely used. He did not think anything would be gained by entering into controversy on the matter after the exhaustive debate at the last meeting, but preferred to wait until fresh facts were brought before the Society. If the fluids shown by Dr. Bantock were really aseptic it would prove that the air of the hospital—and, indeed, the air of London—was purer than the air of Mont Blanc when Professor Tyndall made his experiments. He no longer used any "protective," for Mr. Lister does not use it for wounds of which the edges can be kept in apposition. The reason why the tables included no cases of the past six months was simply that the paper had been written for some time, and included other abdominal sections up to that date (June). He did not imply that all the bad cases died—indeed, under antiseptics a large percentage of bad cases recover. He agreed with Mr. Heath as to the inutility of tapping, and the value of ligatures, and had early come to that conclusion when seeing cases treated by tapping and by the clamp. He hoped that some day the subject of operation for uterine fibroids would be discussed. He had avoided mention of oöphorectomy—an operation which he was sorry to see was being coupled with ovariotomy, whereas it was a far simpler measure, and the indications for its performance had yet to be defined.

The following is an abstract of a paper, "On the Radical Cure of Varicocele," by Mr. HENRY LEE:—The operation advocated in this paper is that of removing a portion of the anterior skin of the scrotum, and subsequently dividing the veins which are to be obliterated. All the steps of the operation are conducted through the wound made by the removal of the skin. The veins are compressed temporarily, so as to prevent hæmorrhage, and then divided. The cut orifices of the veins are sealed with the black hot cautery, which, if of proper temperature, is allowed to adhere to them for five or six seconds. The ligatures and needles used in compression are then removed, and the edges of the skin brought into apposition from below upward by carbolised sutures. Union by first intention takes place more or less perfectly, and the patient is allowed to follow his usual avocations in three or four days.—Mr. PEARCE GOULD described an operation that he had performed for the radical cure of varicocele during the last two and a half years. It consisted in passing a loop of platinum wire round the spermatic veins subcutaneously, and then connecting it with a galvanic écraseur, and making it burn its way through the veins. In all he had performed it eleven times, two of the cases being incomplete, the other nine having resulted in cure without accident. The advantages he claimed for it were its safety, simplicity, painlessness, and efficiency, and the fact that the operation is limited to the diseased parts. He considered Mr. Lee's operation as more complicated, and held that the wound of the scrotum was liable to œdema, and even suppuration; and being closed by the continuous suture, there was no outlet for any effused serum. The removal of part of the scrotum has been shown to be ineffectual for the cure of varicocele, and he doubted if it were needful if the occlusion of the veins were satisfactorily secured. He thought it hardly safe to allow patients to get up and move about so soon as three or four days after such operations on veins, but preferred to wait until the clots were firmly adherent, and the divided ends of the vessels securely closed.—Mr. LEE, in reply, said that although he had now employed the actual cautery in a very large number of cases, he had never had a case of septic poisoning following its use. He attributed this to the complete closure of the veins—the small as well as the large—effected by it. It also effectually sealed the arteries; and if the operation is fairly done there is no oozing whatever. The wounds heal without any sloughing. His object in interfering with the scrotum was to prevent any return of the varicocele.

At the close of the meeting Dr. Heywood Smith exhibited a new apparatus for actual cautery just brought over from Matthieu of Paris, the invention of a M. de Carter, a great improvement in some respects on Paquelin's. There was no bottle to carry about, which not only required the aid of a second person, but was liable to be upset and to give rise to an inconvenient flare, the temperature could easily be regulated by a screw attached to the instrument, and there was also no need for a spirit lamp. The whole apparatus itself was more portable and also less costly.

Reviews and Notices of Books.

Report on the Scientific Results of the Voyage of H.M.S. "Challenger" during the years 1873-76, under the command of Capt. Geo. Nares and Capt. Frank Thomson. Prepared under the superintendence of Sir C. WYVILLE THOMSON, F.R.S. Zoology I. Published by order of Her Majesty's Government. Longmans; Macmillan; Simpkin, Marshall, and Co.

THIS magnificent volume contains the first instalment of the Reports on Zoology, which are the results of the expedition of the *Challenger*, and the plan adopted is undoubtedly that from which the greatest benefit can accrue to science. The *Challenger* was sent out with Sir C. Wyville Thomson in charge of a civilian staff, by whom the specimens captured were, as far as possible, preserved, classified, and arranged. The *Challenger* was a corvette of 2306 tons, fitted with engines of 1206 horse power. The guns she formerly carried were for the most part discarded, and she was modified to suit the special requirements of the expedition. Three gentlemen were associated with Sir C. W. Thomson—Mr. H. N. Moseley of Oxford, Mr. J. Murray, and Dr. V. Willemoes Suhm, a young naturalist of great promise, who appears to have won the esteem and regard of his colleagues, and who unfortunately died from an attack of acute erysipelas on the voyage home. Subsequently considerable assistance was obtained from the services of Mr. F. Pearcey.

The voyage lasted three years and a half, and on arriving at home or previously, as opportunity offered, the immense accumulations of material were placed in the hands of experts to arrange or distribute when old, and to name and classify when new. In this way it is obvious every advantage will be taken of the stores obtained. The work is expected to extend to ten or twelve volumes of zoology, to which will be added an introduction containing a narrative of the voyage and all necessary hydrographical details, and a volume devoted to an account of the meteorological observations taken by the naval scientific staff on board. In the present volume the general introduction to the Zoological series of reports has been undertaken by Sir Wyville Thomson himself, and occupies fifty-nine pages. It is succeeded by a Report on the Brachiopoda obtained during the voyage by Thomas Davidson, which occupies 67 pages, and is illustrated by 4 plates. Then follow in succession a Report on the Pennatulida by Albert Kölliker (41 pages and 11 plates); the Ostracoda by G. Stewardson Brady (184 pages and 44 plates); the Bones of the Cetacea by William Turner (45 pages and 3 plates); the Development of the Green Turtle by W. K. Parker (58 pages and 13 plates); and, lastly, a Report on the Shore Fishes collected during the voyage by Albert Günther (82 pages and 32 plates).

The first and most interesting fact that has been established by this expedition is that in corroboration of what had been previously ascertained from the cruises of the *Lightning* and of the *Porcupine*, and in opposition to the views entertained by even such eminent naturalists as Forbes, there is no actual depth-limit to animal life, but that at depths of upwards of three miles, under a pressure of two and a half tons to the square inch, with a temperature close upon the freezing-point, and probably in utter darkness, animal life is still abundant, and all the principal types of marine invertebrata are represented. Wallich has even shown that the much despised Bathybius, when brought up from these great depths, exhibited signs of motion. The area of the great ocean basin is enormous, and is estimated by Sir W. Thomson at one hundred millions of square miles; and he is satisfied that the nature and distribution of the special fauna of this area may be brought with comparative ease within the limits of human knowledge.

The implements employed in the dredging operations were an ordinary dredge with wire rope, which was connected with india-rubber accumulators, to relieve sudden strain, and a donkey engine to haul it up. Sometimes a well balanced trawl, fifteen feet in beam, was used instead, and with great success. The pressure was so great that the wood of the beam was materially affected. In one instance when a pine beam was used, the wood was compressed till the knots stood out a tenth of an inch beyond the general surface, and on another occasion the beam was crushed as if it had been passed between rollers. The quantity of wire rope of various sizes taken out was very great. They had 10,000 fathoms of 3-inch rope on board, and expended 4200 fathoms; 31,000 fathoms of 2½-inch rope, of which they expended 27,100 fathoms; and 15,000 fathoms of 2-inch rope, of which they expended 10,860 fathoms. They were supplied with 22 trawls, and expended 16. The greatest depth dredged on any occasion was 4575 fathoms. The proceedings adopted were very regular and systematic. A single dredg-

ing operation occupied the whole day. Steam was got up at daybreak (the ship running under sail during the night), and the ship was hove-to during the morning watch, and a sounding taken. The exact depth, the nature of the bottom, and the bottom temperature having been thus ascertained, and a sample of the bottom water procured, the dredge (or trawl) was put over after breakfast, and the line slowly veered to about 4000 fathoms. In from two to three hours the movements of the accumulators indicated that the dredge had reached the bottom, and it was allowed, with all precautions, to drag for an hour or two. The operation of heaving-in then commenced, and continued for four hours or more, according to the resistance from the weight of the dredge or the state of the weather, the usual rate being about one foot a second. When the number of 100 fathom marks on board indicated that the dredge was nearing the surface the naturalists congregated on the bridge, and preparations were made for its reception. As it was usually in the afterpart of the day when it arrived, lanterns were sometimes required. Sieves were used to separate the animals of various sizes, and in hot climates the specimens brought up were at once registered, and put into spirit, though by so doing many opportunities of observing in detail the colours, structure, and consistence of the tissues of the animals were lost. Animals brought up from great depths were always dead. The ship was fitted with an excellently arranged naturalist's room, with an almost unlimited supply of instruments, many thousand wide-mouthed phials, and thousands of gallons of pure spirit; and, as occasion offered, large quantities of material were sent home from distant stations, as from Bermuda, Halifax, the Cape, Hong Kong, and Japan, and yet several thousand specimens in bottles, cases, casks, and jars were brought home, each specimen having the number of the station at which it was obtained, written indelibly on parchment, dropped into the same jar. The breakages were extraordinary few in number, only four vessels being broken out of 5000.

It would appear that the food of many of the groups of the abyssal fauna is the globigerina ooze, which constitutes the floor of the ocean through a large area. This globigerina ooze is so named because the foraminifer named globigerina enters largely into its composition, but with it are associated members of the group of Orbulina, Pulvinulina, Pullenia, and Sphæroidina. All these animals live near the surface of the ocean, but after death drop to the bottom, the organic matter contained in their tests constituting the chief part of the food of the creatures living at great depths. The abyssal fauna living at depths below 500 or 600 fathoms is remarkably uniform; all the classes and most of the leading orders of marine invertebrata are fully represented, but their representation is not in the same relative proportion as near the surface. Thus, the Gasteropoda and Lamellibranchiata are rare. An order of Rhizopods closely allied to the Radiolaria are largely represented, and have been named by Haeckel the Phæodaria. A large series of starfish related to Archaster are found, which recall many fossil forms; also a prominent family of regular urchins, the Echinothuridæ, exist, long known only by an obscure fossil from the chalk. A group of the Holothuriadæ, named the Elasmopoda, is very conspicuous. There are also many crustacea and many fishes, the latter presenting peculiarities in structure that enable them to be easily distinguished from shore fishes, and being especially characterised by the delicacy of their tissues, which easily break down on dissection, and either by the largeness of their eyes or the absence of these organs.

A general examination of the geological evidence, coupled with an examination of the fauna of the abysses of the ocean, has led Sir W. Thomson to the conclusion that the great meridional depressions of the earth's crust now occupied by the ocean date from the period of its original cooling. From the Silurian period up to the present time there has been a continuous ocean with mean bottom temperature oscillating about the freezing-point; and during all this time an abyssal fauna, of whose existence we have evidence in every rescued page of geological history, must have migrated continuously, becoming slowly changed during the lapse of immeasurable time, with the slightly altering phases in the distribution of sea and land. Slowly, very slowly, movement takes place in the vast masses of water. From the polar regions a stream runs constantly towards the equator, displacing the warmer water of the tropical regions, which is driven with equal slowness towards the poles, and owing to the southern pole being colder than the northern, the chief mass of cold water is supplied from this hemisphere, which correspondingly affects the fauna, the majority of the animals supplying evidence of their derivation from a southern source. In the last paragraph of his preliminary observations, Sir W. Thomson states that the study of the abyssal fauna refuses to give the least support to the theory which refers the evolution of species to extreme variations guided only by natural selection—a remark that Mr. Darwin has criticised severely, as being not only a misrepresentation of the view generally understood by the term "theory of evolution," but also as being in opposition to the entire results of the expedition, which seem if anything to establish the continuity of animal life.

Of the several reports we have little to say, since their interest lies in the description and representation by means of lithographs of new or rare species. The figures are beautifully executed, and no expense has been spared to make them complete. The descriptions are of course technical, and as each series has been placed in the hands of the most distinguished naturalists, they will constitute the types to which all specimens in future obtained will be referred.

Dr. Davidson remarks that although the number of Brachiopods brought home was great, only thirty-one species are represented. The greatest depth at which any living Brachiopod was obtained was 2900 fathoms, but they do not abound at depths beyond 500 fathoms. The new species obtained appear to have been few; though one, the Terebratulina Wyvillii, is the finest and largest species of the subgenus Terebratulina hitherto discovered, either in the recent or fossil condition. Professor Kölliker, in describing the species of Pennatula submitted to him for examination, refers for anatomical details to his own classical work upon them, but gives a new classification, which has been rendered necessary by the examination of the new species discovered.

Dr. Stewardson Brady's report on the Ostracoda is very complete. He finds that they are very rare or absent when the ocean bed consists of red clay or globigerina ooze. Fifty-two species were obtained in all, nearly all of which are represented in the forty-four plates which accompany the memoir, and which are most beautifully drawn and printed.

The memoir of Professor Turner gives, in short compass, the characters of the bones of the various skulls, teeth, vertebræ, and other parts of the osseous skeletons that were captured in the course of the expedition.

The account of the development of the Green Turtle given by Mr. Kitchen Parker is of course perfection, and the plates illustrating the paper are coloured in the effective manner familiar to all who have seen his drawings in the Linnæan and other Transactions.

We have so recently drawn attention to Prof. Günther's study of Fishes that we need only say that the present memoir is the well from which his more general description has been drawn, and that it supplies the facts on which his generalisations rest.

In looking over the pages of this volume, and remembering that it is the first instalment of the results obtained

during the voyage, we cannot but feel satisfied with the work done. It reflects the highest credit on all concerned. The liberality of the Government (for such an expedition costs many thousand pounds), the excellent appointments of the vessel for the purpose intended, the judicious selection of the staff, both civil and scientific, the unanimity and harmony with which all the required observations were carried out, and, lastly, the interest and value of the results obtained, are all points on which the organisers of the expedition may be sincerely felicitated. Sir Wyville Thomson may be especially congratulated on having secured the services of such able and willing collaborateurs, and on the rapidity with which he has brought the first results under the notice of the scientific world. We hope soon to have the opportunity of examining the second volume.

WITH the close of 1880 the *Revue Mensuelle de Médecine et de Chirurgie* (Paris: Germer Baillière) completed its fourth year of publication, and the number declaring this fact announces also the separation in future of the *Revue* into two parts—viz., a *Revue de Médecine* and a *Revue de Chirurgie*. Each journal will appear, as heretofore, on the 10th of the month. The *Revue de Médecine* will be edited by MM. Landouzy and Lépine, the "direction" consisting of MM. Bouchard, Charcot, Chauveau, Parrot, and Vulpian. The *Revue de Chirurgie* will be under the direction of MM. Ollier and Verneuil, the acting editors being MM. Nicaise and Terrier. In their remarks upon these changes the editors state that they believe the interests of science will be best served by the alteration. The *Revue Mensuelle* took a high position from its first appearance, and it has been the medium of publication of many important memoirs, as may be seen by reference to the index covering the whole period of four years, which is appended to the last number.

PILGRIMS AT MECCA.

ACCORDING to the report of the Turco-Egyptian Sanitary Commissioners at Mecca, the number of Mahomedan pilgrims collected in and about the holy city (Mecca) during the pilgrimage just ended, amounted between the 3rd and 16th November to two hundred thousand persons; composed of natives of Turkey, India, Egypt, Morocco, Arabia, Syria, Persia, Java, &c. The greatest mortality amongst them after their first arrival in Mecca, about 4th November, was twenty-one daily. During the sacrifices on Mount Arafat the maximum mortality reached thirty-one daily, and in Mecca after their sojourn on Mount Arafat it reached thirty-seven daily; the total deaths from 4th to 19th November being set down at two hundred and ninety-six.

The number of animals—sheep, camels, and other beasts of burden—collected in the neighbourhood of the pilgrim encampment is estimated at a figure far exceeding the number of the pilgrims; and when we remember that this enormous host of people and animals are collected together in one vast encampment without any organized sanitary police to compel compliance with the orders of the sanitary authorities, the number of deaths is not surprising.

The same report states that during four days no less than a hundred thousand sheep were slaughtered in the valley of Mouna, and that, notwithstanding the establishment of thirteen slaughter-houses, fourteen trenches for the interment of the carcasses of the slaughtered animals and the débris, five hundred and five public latrines, the sanitary authorities found themselves utterly unable to enforce their use for want of a proper sanitary police.

The diseases given in the report as the cause of death in the above two hundred and ninety-six cases are rather vaguely stated as fever, diarrhœa, and small-pox; fever, one hundred and eighty-three; diarrhœa, sixty-four; small-pox, forty-nine. As a simple mortality statistic, this statement is perhaps satisfactory enough; but as a scientific medical sanitary question, it would be interesting, and perhaps useful, to have a little detailed correct information on the supposed causes, exact nature, and characters of the fevers and diarrhœa prevailing in such a vast encampment of people of so many different ages and nationalities; also of the amount of sickness and its nature, means of treatment, &c., as the report gives merely the number of deaths.

The crowd is now dispersed, and the pilgrims are on their homeward voyage, about six thousand having passed by way of Suez up to Dec. 4th for Egypt, Morocco, and other places in the Mediterranean and Levant, and, so far, it is gratifying to learn that the general health is satisfactory. About half this number, according to official accounts, has been carried by British steamers—making an average of from 500 to 600 passengers per vessel—five British vessels having arrived at Suez with pilgrims up to the above date, one French, three Turkish, and one Egyptian.

With regard to the utter want of any organised force, and the supineness of the Government to grant proper assistance to the sanitary delegation to enforce attention to hygienic rules, the commissioners say:—"We have had on former occasions to urge a reform of the existing system, and we again bring forward our proposition of last year—viz., to prohibit all sacrifices among the masses of pilgrims in camp; to transfer the slaughter-houses and ditches for interment and débris from the Valley of Mouna to Wady-el-nar; to establish a military cordon outside the camp; to prohibit the introduction of living sheep among the pilgrims. Our conviction is that without some reform such as this we shall have to report in the next few years a lamentable amount of sickness in this valley (Mouna), as the pilgrimage will soon take place during the hottest months of the year."

It is evident from this report that the sanitary commission which, we are told, is sent yearly to Mecca to superintend the sanitary condition of the pilgrims, to prevent the development and propagation of contagious disease, is entirely unsupported, and utterly helpless to perform the work for which, we are told by the Turkish and Egyptian Governments, it is sent. Their faith is not in prevention—not in hygiene, but in quarantine! Instead of organising and carrying out effectually measures to prevent the outbreak of disease, nothing is done till some contagious disease becomes rampant—then is raised the cry of the slothful "quarantine," bringing with it unhealthy lazarettoes, huddling together of ships' cargoes of pilgrims, amongst whom disease already exists, or if not will soon be propagated from an infected lazaretto, vexatious taxes on shipowners to meet extravagant quarantine dues, questions of litigation, sacrifice of life, health, and money, interruption of commerce, and trouble to everybody, while all might probably be prevented.

As the European powers have interested themselves in ameliorating the internal administration of Turkey and Egypt, a little active interference, to introduce properly executed hygienic reforms for the two hundred thousand pilgrims of different nations who collect annually at Mecca would seem to be urgently required, to prevent disease among them there, and its propagation by them to other countries. It will do little towards that to learn that official letters have been sent from one foreign-office to another, to say a sanitary commission has been sent. A commission of five Turkish and Egyptian medical men was sent last year, but with what result their report shows, entirely without an executive under their own control.

THE DEAF AND DUMB ASYLUM.—The annual meeting of the governors and subscribers of this charity was held on Monday at the Cannon-street Hotel, Mr. Charles Few, the treasurer, presiding. The report of the committee stated that they had decided to give a specific trial to the pure oral system for educating the deaf and dumb, as resolved upon at the recent congress at Milan. With that view they purposed to elect an increased number of boys and girls at their election this month, and to form classes so as to give the new system a complete and fair trial with an entirely fresh arrangement of teachers. The expenses for the year were £11,291, being £289 in excess of the receipts. The report was adopted.

THE LANCET.

LONDON: SATURDAY, JANUARY 15, 1881.

IT is to be hoped that the metropolitan public have read rightly the moral of Dr. BREWER'S letter as Chairman of the Metropolitan Asylums Board, reprinted from *The Times* in our columns last week. He told us what indeed ought to have been ascertained long ago, to the saving of no little misapprehension, that the Hampstead Hospital difficulty not only has deprived the Board of the use of a large hospital which might have been invaluable for cases of small-pox in the present crisis, but also stands in the way of the Board acquiring new hospital sites and of erecting new hospitals while the difficulty lasts. In other words, the Metropolitan Asylums Board, as at present circumstanced, cannot do more than make the best use possible of its existing accommodation for small-pox cases, and this is practically exhausted, and the present hospital sites it has the possession and use of admit of very little additional accommodation being placed on them for the disease. The hospital accommodation for small-pox which the Board now possesses has exercised little if any appreciable influence upon the progress of the growing epidemic, is wholly insufficient to compete with the epidemic as it stands, and will be altogether swamped as the epidemic approaches its acme. So far as the arrest or sensible limitation of this outbreak is concerned, it must be understood that as regards the isolation of cases in hospital there will virtually be no check. This is greatly to be regretted, but it will do no harm in the long-run if it serve to fix upon the mind of the metropolitan population that, at the best, isolation can but be a measure of protection subsidiary to vaccination—a truth which there is good reason to fear has been largely forgotten from the prominence which of late years has been given to hospital accommodation for isolation of cases of small-pox. Isolation has its place, and a singularly important place, in the measures for dealing preventively with small-pox; but it can never supply the place of vaccination; and, moreover, while isolation in hospital must of necessity be of limited application, vaccination may be and ought to be of universal application. While, therefore, we are, by a series of unfortunate circumstances, deprived for the moment, in face of a growing epidemic, of the important assistance to be derived from ample accommodation for the isolation of cases of small-pox, the more important means of vaccination remains to us, and if it be diligently and duly made use of, may justify us in looking upon the growing epidemic with little anxiety. This is the moral which should be derived from Dr. BREWER'S letter.

The "if" we have made use of above is a terrible word, however, and includes within its two letters all the difficulties of the situation in regard to vaccination. *If* the local vaccination authorities, where small-pox appeared in the east of London, had followed up the individual cases as set forth in the instructions for their guidance in such circumstances by the Local Government Board; and *if* the sanitary authorities had freely co-operated with them, we should not now be in fear of an epidemic of small-pox. *If* the vaccination authorities of the west and centre of London, learning a lesson from the shortcomings of their brethren in the east, would set themselves diligently and fully to carry out their functions, either with or without the help of the sanitary authorities, there need not be the least alarm of the extension of small-pox in any great degree into the central and western districts. But the vaccination authorities are the Poor-law authorities of the several districts, and we know how difficult they are to move unless operated upon strongly by the public opinion of the ratepayers. Hence the "if," under these conditions, becomes a word of very dubious import. Nevertheless, upon the due exercise of the powers as to vaccination possessed by these authorities the safety of the uninfected districts of the metropolis as to small-pox depends, and the arrest of the disease in the infected districts also depends. This should, above all things, be clearly understood. They are responsible for the primary vaccination of infants, and have powers of revaccination, free of cost to the public, of older children and persons of mature age. *If* all the vaccination authorities of the metropolis could be imbued with a just sense of their responsibility, and be brought at once duly to exercise the powers which have been entrusted to them by the Legislature, London might be saved from the small-pox epidemic at the last hour.

But since the great epidemic of small-pox in 1871–72 *revaccination* has assumed an importance in the question of vaccination it had not before possessed, particularly on account of the great number of persons who have been seized with small-pox beyond the age to which the compulsory clauses of the Vaccination Acts apply. It is to this class of persons that the present condition of things in the metropolis has peculiar importance. Their safety rests wholly with themselves, and, assuming that they have all been vaccinated in infancy, an effective revaccination will make them more certainly proof against the disease than if they had previously suffered from it. It is, perhaps, unfortunate that, in view of these older persons, the Local Government Board has not completed its arrangements for the issue of vaccine lymph from the calf (although it is doubtful whether this lymph would be issued for purposes of revaccination alone), but as this lymph can be purchased in the market, it is for the individuals interested to decide whether they will set off personal safety as to small-pox against the price of a charged tube or an ivory point. But one thing is clear, that persons who ought to be revaccinated will act unwisely if they are not revaccinated as early as practicable, not waiting until the full swing of the epidemic (if it is to come) be upon us, when an abundant experience has taught us that it is not always easy to secure an efficient revaccination, partly from a deficient lymph-supply, and partly from the condition of performance of the operation not always being the best.

NOTWITHSTANDING the loss of the Parliamentary Select Committee by the dissolution of Parliament, it may be doubted whether the question of Medical Reform ever stood better before the public or the Legislature than it does to-day. Changes more or less affecting old corporations are not made in a day. A case has to be made out, and often it

takes a ten years' conflict to determine very simple questions. This is more especially true when the questions are more or less technical. Such is the case of Medical Reform. It was natural that statesmen and legislators should have considered that in surgery there was no authority like that of the College of Surgeons, and that in general medical politics all wisdom was to be found gathered round the table of the Medical Council. This delusion has been nearly dispelled. And the public now sees that the College of Surgeons is a corporation and the General Medical Council a corporation of corporations, and that nothing worse can be devised for such bodies than to leave them in undisputed possession of ancient privileges or vague powers without making them responsible in some degree to the profession they represent, and without bringing them into vital co-operation with that profession in its growth and its activity. This is the meaning of the demand that has been so strenuously made for more than ten years for Medical Reform. The inefficiency of the present Medical Council has been most painfully and completely demonstrated. The number of representatives of separate corporations in the Council has been shown to import into debates rather a care about financial matters than about the interests of the public. We notice in another place the action of certain Corporations that practically sell their highest qualifications, and what ought to be their greatest honours, in a way that will be thought almost incredible. Some of the licensing examinations of our best Examining Bodies leave out the most vital subjects; many of these include only a most inadequate attention to the preliminary and general education of the student. In addition to these evils affecting the profession itself, there is great looseness in the state of the law as regards practice by unqualified persons, so that a large number of deaths occur in cases in which the deceased or his friends have been practically defrauded and made to believe that they were being served by a qualified practitioner, when in reality they were being attended by a totally unqualified one.

Such are the evils crying loudly for removal. The most of them have been practically admitted by the two Governments which preceded the present one. It is not credible that the present Government should be less ready to see the case for Reform, or less likely to entertain it. All impressions to the contrary we believe to be unfounded; and we shall continue to believe so until they refuse to bring in or to support a Bill honestly and earnestly dealing with these great evils.

One thing is wanted—a united Profession. And there are special reasons why the Profession should be disposed to act unanimously at the present moment. It is probable that before long the question of Medical Reform will be again before the House of Commons, and will only need the support of the Profession to commend itself to the acceptance of the Government.

WE desire to cherish the hope that good may come out of the evil trouble at Guy's Hospital, not only as regards that institution but others. The question so painfully raised in connexion with the management of this particular charity for the sick poor has been much, and long, vexed elsewhere. There is one fundamental error underlying the widespread dissatisfaction, and it is the cause of all the worry and grievance. The lay committees and administrators of hospitals are jealous of the medical authority which must needs assert itself. In nominal connexion with the older endowed charities are men of the highest social distinction, who accept their position as trustees and governors as posts of honour. They know nothing of the inner working of the institution, and rarely interfere in the deliberations of its governing body, until one day some half-dozen respected members of the executive board appeal to its ornamental colleagues for support, and these personages come down in red-hot zeal to rescue them from a difficulty, or to resist what they are told is an attempted encroachment on lay authority. Matters can never go on prosperously while this system and method of government exist. The existence of an outlying reserve at the call of any party on the working board is a perpetual source of danger. There would be no objection to a tribunal of appeal in case of internal difference of opinion; but the honorary members of a hospital board do not constitute such a tribunal. They are simply voters who may be pressed into the service of the moment by personal influences. It is nearly always against the medical authority this outside might is invoked. There will always be jealousy—that is inevitable; but it would be better to leave the onus of maintaining its supremacy with the minority of any board than to give it the right of calling in special assistance when in difficulties. In these preliminary observations we are trying to get to the bottom of matters, and it is not too much to say that in nearly all the difficulties and differences which develop into scandals in connexion with hospital management the impracticable party—that is, the party which *will not* be constrained to act wisely—is originally in the minority, and would so remain but for the aid of the outsiders, who seem ever most ready to come to the rescue of the wrong.

As we have repeatedly insisted, the medical authority must be supreme in a medical charity. This does not necessarily mean that the governing body should be wholly composed of medical men, or even that the profession needs to be in a majority; but inasmuch as all the work and charity proper to the institution is medical, the chief actors in the benefaction ought to be largely represented on the Board of Management. The point to make good in order to sustain this view of the case is that a hospital is essentially a medical charity. Can this be seriously doubted? The only earnest objectors to the proposition we have just laid down are the religious enthusiasts and ecclesiastical propagandists who regard hospitals as promising spheres for the carrying out of their purposes. With these persons we join issue. Let the preacher occupy his pulpit, and the polemical disputant select any appropriate platform for his work; the hospitals are simply houses of medical treatment for the sick. The spiritual needs and desires of the patients should be simply satisfied by ministers of their own persuasions. A sick chamber is not the place for preaching or teaching. Priests, teachers, and "ministering sisters" are out of place in such an institution, the latter more particularly, because under cover of services to the body they do not scruple to attempt what they are pleased to regard as "service to the soul." It is, in our judgment, wholly foreign to the purposes of a hospital to carry on missionary work within its walls. Medical men attached to houses-of-

cure for the sick should make this understood. Nothing can, or must, be allowed to interfere with the effort to cure disease. If the patient desires to see a minister of his own denomination he should have a perfect right to do so; but the sick Churchman should not be irritated by the efforts of the Roman Catholic or Dissenter, or the Catholic be exposed to the zeal of the Protestant, still less should the "Evangelical" be annoyed by the parade of Ritualism, either in words or services, or a special garb worn by the nurses. A hospital is an essentially secular establishment, and it should be conducted by men who are prepared to regard it in this light, and not in any other. With a Committee so constituted there would be little difficulty, because men of business not imbued with any non-natural idea must perceive that a hospital is a medical institution, and can only be rightly administered as such. Take the medical element out of the establishment and nothing remains. This is so obvious that only a preconceived notion of the "opportunity" could possibly induce any sensible person to overlook the consideration, and to give it full effect.

What we mean by the claim of *supremacy* for the medical element is simply that the medical requirements of the sick shall be fully recognised by the Committee of Management. This, of course, implies that there shall be medical men on the board, and in sufficient number to make their influence felt. There is no desire on the part of the medical profession to overstep its province. We do not wish to see physicians and surgeons, as such, entrusted with governing powers. The utmost we ask and claim is that the medical men entrusted with the duty of curing the sick in an institution set apart for that purpose, shall be the judges of what is necessary to render their practice successful. This is surely a very reasonable and simple demand. The house exists for the cure of disease, and the medical staff is appointed to carry out that intention. It follows that the medical staff must select its tools and materials, and generally determine the domestic conditions under which the task confided to it is to be performed. It were idle to argue in support of a proposition so self-demonstrative. Either the claim should be admitted or the enterprise must be abandoned.

The question of the moment is how to secure that the demand we make shall be enforced on those who, having other views of the hospital question than those commonsense enjoins, and looking upon these institutions as "fields" and "mission-houses," are striving to subvert the medical charities of the metropolis and the country generally to their own narrow purposes? A Royal Commission has been suggested. If this can be obtained, good may undoubtedly result from an inquiry. There are, however, certain preliminary considerations which ought to be made plain. First: the Commissioners must include medical men of repute, recognised and trusted by the profession at large. It is vain to hope for a satisfactory issue to any inquiry which is not conducted by men who have a full knowledge of hospital business and the conditions on which alone it can be successfully carried out. There are men in our midst who have had ample experience in hospital service, and yet neither provoked the active antagonism of lay governors nor sacrificed the principle of hospital government on medical principles. Such men have given proof of their discretion and tact, and these are the qualities which it is most necessary, at this conjuncture, to bring conspicuously to the front. Second: any inquiry to be effectual must be exhaustive, and include all the leading hospitals which have large endowments, whether in the metropolis or the provinces. It is especially desirable that the area of the inquiry should be extensive, because while the trouble is widespread, there are scattered throughout the land institutions which thrive and are pervaded by a spirit of contentment, and it is important that the secret of this success should be elicited. To allay all anxiety, give general satisfaction, and make the utmost of the opportunity for the collection of valuable information the field of investigation must be fully covered by the inquiry. Third: the search for evils and causes of friction in the working, and failure in the extended success of medical charities, must be uncompromising. It is as established agencies for the relief of physical suffering, and the cure or amelioration of bodily disease, hospitals require to be scrutinised. No phase of their constitution should be allowed to escape the scrutiny. The method of raising and administering their funds, the mode of selecting their officers, the arrangement of offices and the appointment of persons to fill these offices, with the functions and power of each, require to be studied at close quarters, and in their practical relationship as links in the succession of causes and sequences by which the purpose of the charity is to be carried into effect. If a Royal Commission, constituted in a manner likely to secure these results, and properly furnished and empowered for the business in hand, can be secured, it will do good, but nothing short of a complete fulfilment of the conditions we have advocated can be reasonably trusted, or would be worth the trouble and cost of a trial.

IN the usual acts of volition the mental process is entirely concerned with the results obtained, and takes no heed of the action of individual muscles. In raising a cup to the lips the attention is fixed on the elevation of the hand by the flexion of the elbow, not on the contraction of the biceps, brachialis anticus, and other flexor muscles of that joint. But it is well known that the will can exert control not only over groups of muscles acting together, but upon individual muscles, and, by practice, can cause contraction of muscles formerly not under the direct control of it. Thus, by practice, the biceps can be contracted alone without any other of the flexors of the elbow-joint, each one of the facial muscles can be separately contracted to show its individual action, the scalp can be moved to and fro, or one or other of the muscles of the soft palate can be put into use as desired, and thus its individual action verified. For the most part this power of contracting single muscles independently of the common purposive movements of the body is in abeyance, and cultivated by a few as a study, and by others as an amusement. But it was reserved for a Dr. KJOELSTAD of Christiania to make use of it as a curative agent in certain cases of deformity of the spine, especially lateral curvature. Dr. TIEDEMANN has developed the treatment still further, and Dr. ROTH has recently called attention to it in this country. It is stated that by making patients with lateral curvature of the spine examine their deformity by the aid of a reflecting-glass, a contraction of the muscles which are weakened, and which by their relaxation permit or

even cause the deformity, can be excited by the will. By practice these contractions can be made of longer duration, increased in strength, and excited independently of the aid of vision, so that by a simple act of volition these weakened muscles can be set in action, and the deformity corrected or lessened. It is easy to see how the cure of this affection can be thus expedited and aided—for it is not suggested that it is able alone to cope with severe deformities,—and it indicates a direction in which those who have such cases under treatment may derive help. It is in strengthening the weakened structures and exciting to tonic contraction the relaxed muscles that the true cure of scoliosis lies. Spinal supports may assist by rendering such a return of the normal condition more easy of attainment, but alone they are not calculated to prove curative, and there is ample experience to show that when trusted to for more than accessory aid, they not only disappoint, but may even exaggerate the evil they are designed to benefit.

THE annual Report on the Health of the Navy for the year 1879 has just been presented to Parliament. It has undergone some change in form compared with preceding reports, in conformity with the views "expressed by the Parliamentary Committee on Official Statistics," the tables in the Appendix showing the cases, deaths, and invaliding by classes of diseases only, instead of by each disease as formerly, and the professional details in the Report being curtailed as much as possible. It is stated that "it is proposed, as occasion offers, to ask their Lordships' permission to publish any reports of sufficient professional interest which may be received in office." In the meantime these annual reports lose much of their importance to the profession generally by the changes thus introduced, and are of comparatively little value for the study of the geographical distribution of diseases, and of the causes of sickness and mortality in our Navy. During the year 1879 the cases of sickness in the service generally amounted to 1117, the deaths to 8·58, the proportion invalided to 32·96, and the mean number constantly sick to 44·98 per 1000 of the average strength. These ratios are all lower than in 1878, but the reduction in the mortality occurred in that from accidents which in 1878 had been very high owing to the loss of the *Eurydice*. The death-rate from disease in 1879 was ·91 per 1000 above that of the preceding year. In all these particulars, however, there is a reduction upon the average of the preceding ten years. The cases ranged between 856 in the Home Force and 1620 per 1000 in the East Indies; the mortality between 5·37 on the Australian Station and 22·91 on the West Coast of Africa and Cape of Good Hope; and the invaliding between 15·05 from Australia, and 42·42 from the Mediterranean. The cases were under the average of the preceding year on all the stations except the South-East Coast of America, where there was a very trifling excess, and the West Coast of Africa and Cape of Good Hope, where they were 340 above it, but even there the ratio corresponded closely with that of the average of the last ten years. This excess appears to have been to a great extent the result of the service on shore of the Naval Brigade during the Zulu war. Unfortunately "separate returns, distinguishing the sickness of the crews afloat from that of the men employed on shore, have not been furnished," and it is therefore impossible to state with accuracy the influence of this duty upon the health of the men employed. The mortality was higher than in 1878 on all the stations, except the Home, Pacific, and Australian, and in the Irregular Force, but the excess was very marked only on the West African and Cape of Good Hope stations, where it was in a great measure due to the occurrence of small-pox on board the *Boadicea* on the West Coast. The disease appears to have been introduced into her by some Kroomen shipped at Sierra Leone, of whom twelve took the disease and ten died; twenty-four cases and two deaths occurred among the Europeans. Only one of the Kroomen bore marks of vaccination, and he recovered; the Europeans had all been vaccinated. The deaths from continued fever and dysentery were also considerably above the average, and occurred chiefly among the men serving at Fort Chelmsford, Fort Ekowe, and the Lower Tugela. These diseases were attributed to malaria, and to the impurity of the drinking-water, and the dysentery also to the presence of intestinal worms.

We observe with regret a remark at page 3 of the Report which throws a certain amount of doubt upon the perfect accuracy of the returns as regards the causes of death. It is stated that "there appear in the returns 201 entries for tubercular diseases, while 189 were invalided for and 45 died of them; this apparent anomaly is due to the cause, that the men who were first entered sick for other complaints of the respiratory organs were eventually invalided for or died of phthisis, which developed while they were under treatment." Surely this indicates neglect on the part of medical officers, and perhaps also inefficient supervision, as we presume that in the regulations of the Naval Medical Department care has been taken to lay down rules for such an obvious and frequent occurrence as the change in the returns of a patient's disease, either from a correction of the diagnosis, or from the development of another disease during the progress of, or convalescence from, that for which he was originally placed under treatment. We would call the attention of the new Director-General to the necessity for an inquiry into this matter, and the adoption of measures to ensure accuracy in the future.

Tables are given in the Appendix, showing the influence of age, in four decennial periods, on the prevalence of the various classes of diseases, and on the mortality and invaliding caused by them. The following are the results as regards the service generally. Our space will not allow us at present to enter into the details of the various stations and the different classes of diseases.

Ages.	Per 1000 of mean strength. Cases.	Deaths.	Invalided.
Between 15 and 25	1321	6·7	31·01
,, 25 ,, 35	963	9·41	30·75
,, 35 ,, 45	708	12·75	41·03
Above 45	507	18·91	63·96

This shows that the younger men furnish much the highest proportion of cases, while there is a marked progressive increase in the mortality with the advance of age. The proportion invalided is nearly the same in the first two decennial periods, after which, as might be expected, there is a marked increase.

Numerous detailed tables are also given in the Appendix,

to illustrate the operation of the Contagious Diseases Acts, not only during the year under review, but also for the whole period during which they have been in operation.

A CORRESPONDENT puts to us a very proper question. It will appear simply incredible to most people that a Medical Authority within the meaning of the Medical Act, and among the bodies privileged to be included in Schedule A of that Act, virtually sells its highest qualification. It is very natural, therefore, that we should be asked if such is really the case. The press of this country has been for some years loud and unanimous in its denunciations of some obscure colleges in the United States—where colleges rise up as mushrooms or as Jonah's gourd, but, alas! do not disappear so quickly—which have carried on a thriving trade in Degrees in all Faculties, selling them to persons who had a few pounds to give in exchange for titles which they were not likely to acquire in the ordinary way. Our own notice of this subject was slightly less loud because of our knowledge that some of our own medical corporations do virtually sell their highest qualification. It is now some years since one of them made, it is said, £10,000 in one year by the virtual sale of its lowest qualification. But the question put to us to-day by a correspondent has reference to the sale of another and much more serious qualification—that of the Fellowship of the Royal College of Surgeons of Edinburgh. In answer to his question we have simply to say that the Edinburgh College does virtually sell its Fellowship. That is to say, if any person already possessed of a licence in Surgery from any Licensing Body in the United Kingdom applies to the Edinburgh College for a Fellowship, and can accompany his petition with testimonials showing that he has not broken any of the lesser commandments, the constitution and custom of the College are such that he will receive its Fellowship on the payment of a certain sum. There is no doubt or mystery about this. It was frankly admitted by Dr. ANDREW WOOD before the Select Committee of the House of Commons. But it is a very discreditable state of the law, and should bring the Scottish corporations into the very front of the army of medical reformers, instead of being, as alleged, in the ranks of the principal opponents. In the medical world a Fellowship of a College of Surgeons implies merit. It implies in the English college an extended education and the passing of a very severe examination. It implies probably a pecuniary outlay of nearly £400, over and above the cost of an ordinary medical education. The possession of a Fellowship is a condition of obtaining office in metropolitan hospitals, if not in provincial ones. Can there be anything out of the region of sacred things more serious than to preserve the point of such a distinction? But here is a Royal College of great respectability and renown actually selling it! So that two men may be competing for an appointment of great responsibility, for fitness for which a Fellowship of a College of Surgeons is thought the best security, and yet in the one case the Fellowship is a real thing, in the other it is entirely unreal; in the one case it has been worked for and won, and in the other it has been—bought! Can there be a greater unfairness than for a Royal College to send a man into a community, to work among other men, with such a piece of tinsel to his name? We regret to say that the Fellowship of the Royal College of Physicians of Edinburgh, and of the Faculty of Physicians and Surgeons of Glasgow, are to be had on the same easy and pecunious terms, without examination and *in absentia*, as in the case of the Edinburgh College of Surgeons! The working of this monstrous system has just received a startling illustration in the Report of the Sub-committee on Medical Education appointed by the Committee of Council of the British Medical Association. "We may mention the case of a student who presented himself at the Royal College of Surgeons, London, and was rejected. He immediately started for Edinburgh, where he was again rejected. Upon this he went to Glasgow, and passed. He registered as a qualified practitioner, forwarded certain sums of money to Edinburgh, and, as qualified practitioner, was made a Fellow, without further tests, by the very College which had, not long before, rejected him as unfit, by examination, for the licence!" Nothing can exceed the significance of this simple narrative, and it is to be hoped that the Edinburgh College itself — the college of many illustrious men — will take advantage of impending legislation to relieve itself from a position so discreditable and anomalous.

Annotations.

"Ne quid nimis."

PROPOSED AMENDMENT OF THE PHARMACY ACT.

THE Council of the Pharmaceutical Society have for some time been engaged in framing a draft of a Bill for the amendment of the Pharmacy Act, and have just published the result of their deliberations. The immediate cause of the proposed addition to the legislative regulation of the trade is apparently the decision of the legal tribunals by which the action of co-operative societies in dealing in drugs is declared not to be against the law. Its main object is evidently to render such action illegal, and the chief clauses are framed for the purpose of altering the wording of the Pharmacy Act on which the recent decisions were based, so as to exclude co-operative stores from the right of practising pharmacy. As the *Pharmaceutical Journal* remarks, "a challenge is thus thrown down to the several opponents of those interests which the chemist and druggist is convinced ought to be protected. It is a step which means war to the knife with co-operative stores and their stimulators, in regard to the practice of pharmacy."

Opposition to the Bill is anticipated, it would thus appear, by those who propose it, and that their anticipations will be verified is scarcely doubtful. The object of the proposed additions to the Act is, it is frankly admitted, to afford protection to the pharmacists, a protection which, it is urged, they may claim on account of the study and knowledge now demanded of them before they can engage in their occupation. But in their statement of the case and of their expectations one consideration is apparently overlooked. Neither the Pharmacy Act nor the Medical Act was intended for the protection of the class which it regulates; each was for the protection of the public. For the attempt at amendment of the Pharmacy Act in this particular to be successful, it will be necessary not merely to plead the claims of the pharmaceutical chemists to "protection," but to show that, in the practice of pharmacy at co-operative stores under the direction of a qualified pharmaceutical chemist, any danger to the public is incurred. This, we conceive, they will find by no means an easy task.

Some other clauses of the Bill are likely to meet with little opposition, and may be regarded as real amendments. One of these provides that patent medicines containing poisons within the meaning of the Pharmacy Act shall be subject to the regulations as to labeling and otherwise now in force as regards the ordinary sale of such poisons; and it makes the sale of a patent medicine, whether by wholesale or retail, containing a scheduled poison, without due labeling, an offence punishable by a fine not exceeding five pounds on the first occasion, and ten pounds upon any subsequent occasion, upon summary conviction. This is a very desirable provision on account of the great number of fatal accidents which have arisen from the misuse of secret remedies containing poison. By another clause the onus of properly labeling these medicines is thrown upon the makers, not the vendors of them. Another provision exempts all chemists and druggists carrying on business on their own account from serving on juries, a just and reasonable proposal. Widows are left as under the present Act, but the time during which executors may carry on a business on behalf of widows is limited to three years, unless this period is extended by the Pharmaceutical Society.

INDIAN LIBEL CASE.

WE have received from India a detailed report of the judgment in the appeal from the conviction of the magistrate of Allahabad in the case of Hall *v.* McLeod and Wyman. It may be remembered that Surgeon-Major Hall brought a criminal action against the editor and publisher of the *Indian Medical Gazette* for defamation, in imputing to him untruthfulness in an advertisement inserted by him in the *Indian Herald*, soliciting contributions for the Allahabad Eye Hospital, and accusing him of unprofessional conduct in the publication of the advertisement. Judgment was given for the plaintiff in the Allahabad Court, and the defendants were sentenced to a fine, or in default to simple imprisonment. Against this judgment the defendants appealed, on the grounds that the article complained of was not defamatory, but was a fair criticism on Dr. Hall's advertisement, and that it came within the exceptions to Section 499 of the Indian Penal Code on the subject of defamation. It was also pleaded that the Court of Allahabad had no jurisdiction, and that the publication by the defendants had not been proved. The Chief Justice, Sir R. Stuart, gave judgment against the appellants on the two last pleas, but in their favour on the first and most important plea. The conviction, therefore, was quashed. The Chief Justice expressed his opinion that the prosecution had utterly failed, and regretted that it had ever been undertaken. He thought that if the defendants' conduct was made the subject of complaint at all, it should have been tried in a civil and not a criminal court. But while thus blaming Dr. Hall for the course he adopted in bringing a criminal action, and without any previous communication with the defendants, he exonerated him fully from the charge of unprofessional conduct. He says: "For myself, I am far from approving of this article [in the *Indian Medical Gazette*], and I differ in opinion from the writer of it. I think it shows bad taste on the part of the author, and that to some extent it casts a slur on the prosecutor and does him injustice. I consider that Dr. Hall was quite entitled to advertise the claims of the hospital as a public institution. .....Dr. Hall could have very well afforded to have disregarded the unmerited attack, as perhaps it may be called. He is a gentleman well known and highly respected in these Provinces for his many good qualities and for his professional knowledge and skill, and I know of no officer of Government more worthy of esteem." The remarks of the Chief Justice appear fully to bear out the opinion we expressed when the report of the first trial was before us, that Dr. McLeod had placed himself in an unpleasant position in having made so serious a charge against Dr. Hall, apparently without sufficient inquiry; while Dr. Hall had been deficient in courtesy in having commenced a criminal action against a member of his own profession and an officer of his own service without having first afforded an opportunity of withdrawing the imputations which he had put forth, apparently from a misapprehension of the facts of the case.

PROFESSOR GAIRDNER ON POINTSMEN'S WORK.

PROFESSOR GAIRDNER of Glasgow, moved by recent railway accidents due to faults of pointsmen, publishes a letter in a Glasgow contemporary, in which he details the case which he had treated in the Royal Infirmary in 1872. This patient was a pointsman at Rutherglen station, where from 250 to 300 trains were due every twenty-four hours, or about one train, on an average, every five minutes. Though the intervals at night were long, in the daytime they were such that, in the man's own words, "trains would pass for an hour together as close as they could follow." The work was divided into a day and a night shift, the latter being thirteen hours, the former eleven. The pay was £1 a week. There was no time for meals, which had to be taken while at work. The wonder would be how any man so situated could escape giddiness or some break down in the nervous system. The fact that men do so so often is a wonderful testimony to the principles on which the nervous system is constructed. But, as it happened, this man came to suffer from a nervous complaint characterised by passing insensibility, of which the patient was sometimes quite unconscious. The man said that when his duty was most anxious the disorder was at the worst. Dr. Gairdner thinks the public are to be congratulated on that man having come under treatment. It seems highly probable that in this way an accident was averted. Since then Dr. Gairdner has taken pains to ascertain the rules of French lines, and finds them much more considerate of the limitations of human faculty. On the Scotch line the hours have been reduced to eight, but without special intervals for taking food. The patient got well after two or three months' hospital rest and treatment. Dr. Gairdner sets a good example in publishing this case. By itself it shows the need for more consideration of responsible railway servants. If any of our readers have similar cases in their clinical books they will do well to publish them. It must especially be remembered that in the worst attack in the hospital the patient had no memory of what had occurred. It will be necessary to examine pointsmen for something more than mere colour-blindness.

"SPERMATIC CRYSTALS."

FURBRINGER has examined the composition of the contents of the seminal vesicles and prostatic fluid from fifty bodies, and the prostatic secretion from twenty healthy individuals, and has found that the "sperm crystals" described by Bottcher occur exclusively in the prostatic secretion. They appear to be identical with the so-called Charcot's crystals (which were really discovered by Robin), and which are said by Schreiner to consist of a phosphate of a new organic base. In the secretion of the prostate gland this organic base appears to exist in combination with some other than phosphoric acid, and, for the formation of the crystals, the acid must be furnished either by the secretion of the testicles or by post-mortem decomposition of the walls of the ducts. The clinical significance of the discovery of these crystals in secretions which come out of the urethra is that there is an abundant secretion from the glands of the prostate.

SERIOUS CHARGE AGAINST A MEDICAL MAN

AT an inquest held on the 8th inst., at Whitchurch, near Bristol, before Mr. Biggs, Deputy-Coroner for Somerset, a very serious charge was brought against a medical man. According to the evidence, the deceased was a married woman, forty-seven years of age, who for ten years had needed no medical advice. On the 29th ult. she complained of a sore-throat; and as more serious symptoms soon developed, Mr. Lodge was sent for. He promised to come in the evening, and meantime sent a bottle of medicine. As he did not attend, repeated messages were sent to him representing the urgency of the case; and when at length, on the afternoon of the 1st inst., he reached the house, the woman was dead. It appeared that she had been unconscious for some time before death, and that there was suppression of urine. In spite of the fact that Mr. Lodge had not attended the deceased during life, he gave a certificate of death from enteritis. Meantime the case had been reported to the coroner, who decided that an inquest was necessary, and directed Mr. Crisp of Keynsham to make a post-mortem examination. Mr. Crisp, who was assisted by Dr. Roué of Clifton, gave it as his opinion that death had occurred from arrest of the action of the kidneys, probably from exposure to cold. The kidneys were found to be markedly contracted and cirrhotic, and there was no urine in the bladder; the heart was fatty. There was no trace of enteritis. The coroner, in summing up, regretted that Mr. Lodge had not seen fit to be present at the inquest, although he had been informed that it was to be held. He said that a medical man could not be compelled to attend a patient, but that Mr. Lodge should have stated that he was unable to visit the deceased, and thus have enabled the friends to obtain other advice. With reference to the certificate of death, he said that "an act had been done which, if not illegal, approached so nearly the borderland of what was legal and illegal as to be stigmatised as irregular in the strongest sense of the word. If there was one law more than another whose objects were to preserve life and to prevent abuses, it was that law of registration of deaths; and if medical certificates were to be given in this way, it went very far to defeat the whole reason for registration. Such a course was grossly irregular and in the highest degree improper; and if it were passed by in silence it would open up abuses which he hardly dared to contemplate." The jury, in bringing in a verdict in accordance with the medical evidence, expressed their regret that Mr. Lodge did not attend the deceased after promising to do so.

The evidence summarised above appears to set out two charges against the medical man implicated; the first, that although repeatedly sent for, he delayed his visit until the woman was dead; the second, that, although he had never seen the deceased during life, he gave a certificate as to the cause of death. It is a minor point that the post-mortem examination revealed no trace of the certified cause of death. We shall be glad to hear what Mr. Lodge may have to say in defence on both the issues raised.

THE ORGANS OF TOUCH.

M. RANVIER has communicated to the Académie des Sciences a note on the structure of the organs of touch. The study of the exact structure of the tactile organs is a matter of considerable difficulty. Hence some observers have found only nerve-fibres rolled in a spiral, while others have discovered terminal structures, more or less complicated, and Merckel even believed that he had discovered terminal sensory cells. M. Ranvier has found that much light is thrown on the subject by the examination of the structures in newly-born children and young infants. At birth, the nerves of touch may be found to pass into certain papillæ on the palmar aspect of the fingers, immediately beneath the cells of the mucous layer of Malpighi. There they form a network of which the ramifications, although distinct, are closely pressed together. At this time the terminal network which represents the future tactile corpuscle presents no admixture of cellular elements; but, beneath it, there exists a small collection of round cells. By examining the changes of structure in children of different ages, the successive phases of evolution of the tactile corpuscles can be traced. Gradually the cells, at first collected beneath the ramification of nerve-fibres, surround it, and pass in among its branches. The whole soon becomes limited, and thus a tactile corpuscle is formed. Sometimes the corpuscle remains unilobar, but more frequently other lobes form in the same manner as the first, and are joined to it. Hence it is that in young children, as Langerhaus has stated, the nerve-fibres which enter into the composition of the tactile corpuscles are separated by layers of cells. In the course of development these cells become pushed to the periphery of each lobe, and most of them undergo a considerable atrophy. This fact alone suggests that they are not nervous in nature, since the nerve-cells, so far from undergoing atrophy during growth, gradually increase in size up to their full development. Ranvier has never been able to see any communication between the nerve-fibres and the cells in the tactile corpuscle; the ramifying branches of the nerve-fibres, after a tortuous and usually complicated course, end by free flattened knobs.

SALT AND SNOW.

WHEN next a storm of snow falls in the metropolis it may be well to remember that the device of scattering salt on the whitened ground with the view of causing the deposit to melt is simply that of making a freezing mixture. In the rapid change of form from solid to liquid the snow absorbs—to use an obsolete expression—a large amount of heat, no inconsiderable part of which may chance to be appropriated from the extremities of passing foot-passengers. The soles of boots and shoes are not improved by being saturated by the saline mixture, and "the cold strikes" very perceptibly. The police regulation which requires that householders shall clear the snow from the pavement in front of their houses is sufficiently ridiculous, leading, as it does, to the production of such a slippery footpath that those who would walk safely must walk on the road. It will be making confusion worse confounded, and intensifying the nuisance created by a casual fall of snow—not now-a-day a very common infliction—if the thoroughfares are to be converted into baths of "freezing mixture," to the detriment of health and the injury of shoe-leather. It would be worth something to be rid for a while of the incubus of "science applied to health," and the astute refinements of a labouring and laborious civilisation.

NIGHT-WORK AT HOSPITALS AND THE HOSPITAL SATURDAY FUND.

IT is reported that the collection of the Hospital Saturday Fund for last year reaches £6604, of which £1598 was raised by street collections, and £5205 by means of *employés*, shops, &c. The total was an increase of £452 on the previous year. This is so far satisfactory, but we agree with the recommendation of the president, Mr. Morley, that the efforts of the Fund should be directed to increasing the amount of the collection in workshops. £5205 is a very inadequate contribution from the working men of London to institutions which exist very largely for their benefit and those of their families. The expenses of the movement have fallen from 27 per cent. to 14 per cent. This, too, is

satisfactory. We cannot endorse the suggestion made by the President that the Fund should urge on the hospitals the propriety of opening their gates at night, for the convenience of men employed during the day. At the very least this suggestion requires a good deal of consideration. For one thing, men employed during the day should not, as a rule, go to hospitals; they are not proper objects for hospital treatment, but for treatment by private practitioners or at provident dispensaries. Secondly, hospital work, like all other work, is best done in the daytime. Thirdly, for the run of patients night would be a bad time. On these and other grounds we do not see our way at all to approve of the suggestion, that hospitals should be open for night-work to all comers.

A CURIOUS FACT IN ANIMAL REPRODUCTION.

A CURIOUS fact has recently occurred which throws some light on similar cases reported of the human species, but which have been received with considerable doubt by some authorities. The *Journal de Médecine Vétérinaire de Lyons* states that last April, on a farm in the department of Isère, a mare about ten years old gave birth, at full time, to a foal. Soon after the throes of parturition recommenced, and with assistance another foal was brought into the world. Twin foals are sufficiently rare to cause astonishment at any time, but the astonishment of the attendants was changed into amazement when they discovered that it was not a horse foal they had taken from the mare, but an unmistakable mule. The little creature, unfortunately, and as is generally the case with twins in solipeds, did not long survive its birth. The veterinary surgeon who was subsequently called in made inquiry into the case, and as a result he gives the following explanation:—It is a very common practice in Dauphiné to present the mare, when in œstrum, twice to the stallion, and at a brief interval, believing that fecundation is more certain by this procedure. But, as it seldom happens that the villagers can obtain the services of a stallion which can serve the mare twice with only a few minutes between, or yet a second stallion, and as male asses are by no means scarce, they oftentimes employ one of the latter to succeed the horse. And this is what happened with the mare alluded to.

The case is not absolutely unique, even in equine physiology, however, for Fleming, in his "Text-book of Veterinary Obstetrics" (p. 152), gives six similar instances, and one in which a mare, put first to an English stallion and soon after to a Barb, produced twin foals—one resembling the first, the other the second stallion. It may be noted that, of all the domestic animals, the mare is the least disposed to multiparity.

THE INTERNATIONAL WATER SUPPLY REFORM ASSOCIATION.

ENGLISH travellers have so often denounced the dangers of drinking water in Continental hotels and towns, that the formation of an international society for the special purpose of calling the attention of the governments of Europe to the quality of the water supplied throughout each country, should meet with very general approval, at least among Englishmen. This society, though founded in Paris during the International Exhibition of 1878, may be considered to have only now commenced its first year of practical existence. The movement was originated by Mr. J. G. Jäger, director of the Amsterdam Water Company, who early secured for the association the patronage of their Majesties the Kings of Holland and Belgium. An international Committee was formed, a programme and set of rules drawn up and submitted to the approval of some five hundred delegates at the International Congress of Hygiene, held at Turin last September. Definite rules were then adopted, and the Association Internationale pour l'Eau Potable comes into actual existence with the advent of this year. The honorary presidency was offered to Sir Richard Wallace in consideration of the great services he has rendered in supplying drinking water to the public. The Prince of Wales has also been asked to patronise the association in consequence of the personal interest he has displayed in the question of water-supply. The head-quarters of the society are in Paris, and its organ, the *Revue d'Hygiène et de Police Sanitaire*, is edited by Professor Vallin. Dr. F. de Chaumont of Netley Hospital, and Mr. Edwin Chadwick, C.B., are among the members of the English committee. All persons interested in sanitary reform are invited to join this association. The subscription is fixed at ten francs per annum, half to be sent to the central committee, and the remainder kept for the purposes of local agitation, &c. It will be the business of each national committee to bring every influence to bear upon their respective governments, so that the central authority may exercise its full power in compelling local districts boards, &c., to provide suitable drinking water for the use of all inhabitants. Everyone who has travelled on the Continent, and visited even certain of the most fashionable health-resorts, will recognise the urgent necessity of some such action; while at home in England we are too well aware how much there still remains to be done to save the populations from the dangers of water contamination. For the present, however, it is among the smallest countries in Europe that the Association has met with the most success. We have seen that the King of Holland and the King of Belgium have lent their personal support, and now we learn that an influential Greek section has been formed under the Presidency of Dr. Bambas, and with the mayor of Athens as one of its active members. In France and Italy the Society has received a fair amount of support, but it still remains to be seen whether England will lend any efficient aid.

PHYSICIAN IN ORDINARY TO THE QUEEN IN IRELAND.

WE learn that Dr. Benjamin G. McDowel has been appointed as Physician in Ordinary to Her Majesty in Ireland, in the room of the late Dr. Alfred Hudson. Dr. McDowel is a graduate in medicine of the University of Dublin, a Member of Council and Fellow of the Royal College of Surgeons in Ireland, Physician to the Whitworth and Hardwicke Hospitals, and formerly Professor of Anatomy in the School of Physic, Trinity College, and Surgeon to Sir Patrick Dun's Hospital, Dublin. The appointment is one which is regarded with approval by the medical profession.

THE FIRST TO FEEL THE FROST.

THE first frost or fall of snow, leaving a slippery deposit on the ground, inflicts a fearful impost of toil and suffering on the horses. It does not need a highly sensitive development of the instinct of sympathy to be moved with compassion for the evident misery and injury, the fear and the muscular straining to preserve a footing, entailed on the animals harnessed to heavy omnibuses, and even between the shafts of cabs. Indeed, the cab-horses probably suffer the most, because they are constantly employed on the cross thoroughfares, whereas the main routes traversed by the public vehicles are more readily cleared, or reduced to a quagmire, which, however disagreeable, is not slippery. It is inevitable that there must be a heavy loss of property in horseflesh, as well as the suffering inflicted, due to every sudden frost, or fall of snow. The immediate results may not be great, but the violent straining of muscles which the horse undergoes is not without its persistent conse-

quences. Can nothing be done to prevent this evil? It is strange that the extensive adoption of asphalte and wood pavings has not led to the invention of a shoe which, while affording that protection of the hoof which is supposed to be necessary, shall give the foot a secure hold on the ground. It would seem as if the solution of this apparently not very complex or difficult problem has defied the ingenuity of contemporary talent, as it defied that of our predecessors. We are, of course, familiar with the various devices which have been suggested; but, while looking at them practically, must confess to feeling convinced that not one is so complete a success as to warrant popular use. This is a matter in which medical men, who nearly all employ horses, and are compelled to expose them to heavy risks in all weathers, are especially interested.

TRICHINOSIS.

ACCORDING to a recent report to the Sanitary Committee of Massachusetts, it appears that of 2701 pigs examined during five months no less than 154, or nearly 6 per cent., contained trichinæ. The animals came from different and distant regions, but the majority were from the western States. The same report affirms that rats are affected with trichinosis at Boston to a much larger extent than in Germany. Of fifty-one rats caught in a Boston slaughter-house thirty presented trichinæ. On the other hand, twenty-eight fowls fed in the establishment were found to be healthy. Forty rats taken in another large slaughter-house all contained trichinæ; but of sixty found in different stables only six were thus affected.

In France little consideration has, until lately, been given to the danger of trichinæ in imported pork. At Lyon, however, inspection has been commenced, and has quickly born fruit. An enormous consignment of lard, amounting it is said to 120 tons, was lately received at Lyon from New York. Of fifty specimens examined immediately after arrival three were found to be infested with trichinæ. At Barcelona six cases of death from trichinosis have occurred in three months.

THE MEDICO-CHIRURGICAL SOCIETY.

THE last two meetings of this Society have been practically wholly taken up with papers and discussions on antiseptic ovariotomy, in a great measure travelling over the same ground. We notice that there is another paper announced on the results of 200 cases of this operation, and we are compelled to draw the attention of the secretaries and council of this Society to the serious inconvenience and waste of time entailed by such procedure. It might surely have been arranged for the three papers, if, indeed, they were necessary, to have been read on the same evening and discussed together. It is at least open to doubt how far such statistical papers meet the object held in view by the Society, but to deliberately and by arrangement assign three several sittings to three papers all running on the same lines, is a serious interference with the usefulness of its meetings.

A MEDICAL MINISTER.

THE portfolio of Public Instruction in the Cairoli Cabinet has, after due deliberation, been accepted by Dr. Guido Baccelli, the distinguished professor of clinical medicine in the Roman University. The Italian Legislature, both in the Chambers and the Senate, owes much to the physicians and surgeons who are so numerously represented in either House, but to none more than to Dr. Baccelli. *Sanitas sanitatum omnia sanitas* has been his watchword; and in every measure affecting, however remotely, the public health his voice has always been raised with power and effect. On other subjects he has signally exemplified the advantages which a mind trained in the medical *palæstra* can confer on the legislator, and more than once a ministerial crisis has been averted by the skill with which he brought back an agitated and mutually recriminating House to the merits of the question before it. His tenure of office will shortly, we believe, be marked by the introduction of measures for the improvement of University training in general and of medical qualification in particular—measures which cannot fail to interest those who are engaged in similar reforms among ourselves. Dr. Baccelli, we believe, has no thought of giving up his large consulting practice, but he has resigned the chair of Clinical Medicine, to which Dr. Panizza, his occasional substitute, has just been appointed his successor.

FOOT-AND-MOUTH DISEASE.

A SERIOUS invasion of eczema epizoötica, or foot-and-mouth disease, has taken place, after the country had been free from it for several months. The infection is supposed to have been conveyed by diseased cattle from the North of France, which arrived at Deptford Market some time ago. Thence it was carried in every direction, the fairs and markets being the chief sources of dissemination. It now prevails pretty generally over England, notwithstanding the efforts made to check its progress. It is to be feared that inspection of the cattle markets is often at fault. For the chief metropolitan market there is only one inspector, and as the number of animals crowded together is frequently more than two thousand, it is evident that they cannot be submitted to that careful examination which is so necessary for the detection of the disorder, particularly at its commencement, or in its milder form. The infection can be conveyed by all kinds of media independent of the living animal, and this certainly renders the extension of the disorder far more easy, and its suppression much more difficult, than some other transmissible diseases of animals. It must not be forgotten that the infection can be transmitted to other than the bovine species, and man himself is not proof against it. The milk is the chief vehicle of infection.

PATHOLOGICAL SOCIETY OF LONDON.

THE newly elected President, Dr. Wilks, will take the chair for the first time at the meeting of the Pathological Society on Tuesday next, and, according to custom, will deliver some introductory remarks before the regular business of the Society is proceeded with.

DEATH ON THE STAGE.

A TALE is told of an excited medical student who, while watching the final catastrophe of "Romeo and Juliet," and impatient of the supineness of those who discover the dead body of Romeo, called out, "Hold hard while I run and fetch a stomach-pump." A similar feeling must take hold of any medical member of the audience of the Prince of Wales' Theatre, while watching the death of Mr. Coghlan in "The New Trial." Mr. Coghlan (as Connaro) takes poison, and is some five minutes in dying; while a doctor of medicine (a modern scientific doctor, who has a microscope on his table) stands calmly by without attempting to interfere with the deadly draught, the nature of which we (and probably the doctor as well) were quite unable to diagnose from the symptoms of the patient—symptoms which were of the stage stagey, albeit that they caused no little sobbing and sniffing amongst the audience. Such exhibitions are not pleasing or instructive, and we think that a return to the usages of the ancients, in allowing all deaths to take place out of sight would be a distinct gain to the modern stage.

SEATS FOR SHOPWOMEN.

THE shopping season having recommenced we renew our appeal to the humanity of ladies, and request them to bear especially in mind the under-mentioned large establishments conducted by firms which have intimated their willingness to provide seats for their *employées*, and to sanction the use of them in all intervals of counter-serving.

Alger and Co., Brighton.
Arnott and Co., Henry-street, Dublin.
Arnott and Co., Jamaica-street, Glasgow.
W. Baker and Sons, Lower Dorset-street, Dublin.
T. J. Blackwood, George-street, Edinburgh.
J. Brown and Son, George-street, Aberdeen.
Capper, Sons, and Co., Gracechurch-street and Fenchurch-street.
Debenham and Freebody, Wigmore-street and Welbeck-street.
Dickins and Sons, Regent-street.
Farmer and Rogers, Regent-street.
Fraser, Sons, and Co., Buchanan-street, Glasgow.
Gainsford and Co., High-street, Borough.
Gowans and Goodlet, Edinburgh.
S. Hannington and Sons, North-street, Brighton.
Hitchcock, Williams, and Co., St. Paul's Churchyard.
H. Hoadley, Buckingham-palace-road.
Howell, James, and Co., Regent-street.
Lewis and Allenby, Regent-street.
McBurney and Co., Aston Quay, Dublin.
M'Swiney and Co., Lower Sackville-street, Dublin.
Marshall and Snelgrove, Oxford-street.
Pim Brothers, South Great George's-street, Dublin.
Peter Robinson, Oxford-street.
William Tarn and Co., Newington-causeway.
T. Venables and Sons, Whitechapel.
J. H. Webb and Co., Corn Market, Dublin.
William Whiteley, Westbourne-grove.

INTESTINAL BACTERIA.

NOTHNAGEL of Jena has been investigating the organisms found in fæces, and has examined the microscopical characters of five hundred stools in health and disease. He found many microscopic organisms constantly present, but that which was found in greatest abundance was the Clostridium butyricum of Prazmowski (the butyric vibrio of Pasteur, the Bacillus amylobacter of Van Tieghem). It occurred in the fæces in which no starch could be demonstrated. It is probably this which has given rise to the statement that the yeast fungus is often present in the fæces; in point of fact it is very rarely found in the fæces. Riesenfeld and Brieger discovered butyric acid in both the intestinal contents and in stools, and the product is doubtless the result of the growth of these bacteria.

SOME dissatisfaction is naturally felt in Aberdeen at the action of the Endowed Institutions Commissioners in reducing the medical bursaries in the University from twelve to eight. At a meeting of the Aberdeen Town Council last week, Dr. Beveridge especially drew attention to the impropriety of this step, and thought the Commissioners must have misinterpreted the evidence placed before them in reference to the matter. It was ultimately understood that any representation made to the Home Secretary with a view of reversing the decision of the Commissioners upon the subject would have the support of the Council.

AT a meeting of the Norfolk and Norwich Medical Chirurgical Society at Norwich, on January 4th, 1881, the following resolution was moved by Mr. Alan Reeve Manby, seconded by Dr. Bateman and Mr. Cadge, and agreed to unanimously, "That this meeting, reprobating the systematic exclusion of the medical officers from the government of hospitals, tenders its sympathy to the medical staff of Guy's Hospital in the present crisis."

THE Marquis of Bute has expressed his willingness to defray the entire cost of construction and maintenance of a small hospital for Aberdare. The sole stipulation appears to be that the nursing shall be conducted by Sisters of Mercy.

MM. FOURNIER, GOUGUENHEIM, and KRISHABER are nominated as members of the organising committee of a Congress of Laryngology to be held in Paris in September, 1882.

SURGEON-MAJOR SIR SAMUEL ROWE, K.C.M.G., Governor of the West African Settlements, has been appointed Governor of the Gold Coast Colony.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

SMALL-POX HOSPITALS.

Mr. N. C. Collier, the medical officer of health of the Fulham District of the metropolis, has addressed a letter to the local authority protesting against a proposition of the Metropolitan Asylums Board to increase the accommodation for small-pox patients in the Fulham hospital by 250 beds. Mr. Collier disavows any sympathy with the opinion that small-pox is distributed from a small-pox hospital by atmospheric infection. His experience does not appear to lend any support to this view of the question; but he entertains no doubt of the exceptional prevalence of the disease in the neighbourhood of hospitals (meaning the metropolitan we presume), and he is equally convinced of the causes of such prevalence. He attributes this prevalence to the unusual opportunities of the indirect communication of the contagion by the conveyance of patients to the hospital, through carelessness of the carriers, the friends accompanying them, and the flocking of both relatives and friends into the district of the hospital from infected centres. He writes of the impracticability of getting rules for preventing this indirect communication of infection observed by sub-officials and others engaged in the conveyance of patients; of the impossibility of controlling the contagion conveyed in the movements of persons in the infected houses, and which may even attach to the money passed across the bar and counter of the tavern and refreshment house. It is obvious that the larger the number of patients accumulated at one spot the greater must be the multiplication of the chances of disseminating the contagion of the disease in this fashion. The true way to minimise this danger he holds is for each parish to provide its own hospital, and he points out that this was the original intention of the promoters of the Sanitary Act, 1866. Mr. Collier is generally right in this reference. Our present huge hospitals are outcomes of the wondrously incoherent state of the local government of the metropolis. They were devised for poor-law purposes, irrespective of medico-sanitary requirements or of their relation to the public-health generally. But the sanitary authorities of the metropolis ignored as a rule their moral if not legal duties under the Sanitary Act of 1866, and so it has come to pass that the Metropolitan Asylums Board has had to act as both sanitary and poor-law authority in the matter of hospital accommodation in infectious diseases. If each metropolitan sanitary authority had carried out frankly and fully the intention of the Act of 1866, it is probable the metropolis would have escaped its present difficulties as to infectious hospital accommodation, and that a much greater control would have been exercised over the spread of small-pox.

THE HAMPSTEAD HOSPITAL.

Mr. Pearson Hill and the solicitors for the plaintiff in this case have taken exception in *The Times* to certain statements in Dr. Brewer's letter, which we published from that journal last week. Mr. Pearson Hill writes of the "parish of Hampstead" as if it were situated in space and not contiguous to the parish of St. Pancras, and as if a parochial boundary were proof against infection. His letter, however, is chiefly

interesting as giving a summary of the plaintiff's evidence in this case as set before the jury, and it may be assumed was accepted by them. A greater condemnation of the anomalous position of the Metropolitan Asylums Board in the case could not well be conceived.

The city of Rochester and the town of Chatham having combined to form a joint Hospital Board, application is to be made to the Local Government Board for permission to borrow money with the view of purchasing two and a half acres of land whereon to build a hospital for infectious diseases.

A farmer has been fined £6 17*s.*, including costs, at the Leicester County Police-court, for mixing the milk of certain cows affected with foot-and-mouth disease with other milk, and selling the mixed milk for human food, contrary to the Order in Council of the 9th July, 1879.

The *East London Observer* reports that the Local Government Board have decided to call for the resignation of the two medical officers in St. George's-in-the-East, a disagreement between whom led to an official inquiry, conducted by Dr. Bridges, to which we referred a short time ago.

One of the poor-law medical officers of Whitechapel is held to have vacated his appointment for having removed his residence outside the limits of the district for which he was appointed.

The Halsted Rural Sanitary Authority have adopted the recommendations of a committee of their body to establish three cottage hospitals for infectious diseases in their district.

We understand that it has been decided to remove the sanitary offices of the Port of London Sanitary Authority from Deptford to Greenwich.

The Local Government Board has issued an important series of model by-laws on Houses let in Lodgings, under the 90th section of the Public Health Act, 1875.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

Influenced by the continuance of mild weather, the rate of English urban mortality is still exceptionally low for the time of year. In twenty of the largest English towns, estimated to contain in the middle of this year nearly a third of the entire population of England and Wales, 5883 births and 3109 deaths were registered last week. The births exceeded by 698, while the deaths were 166 below, the average weekly numbers during 1879. The deaths showed a decline of 199 from the number returned in the previous week. The annual death-rate, which had been equal to 18·6 and 23·7 in the two previous weeks, declined again last week to 21·3. The lowest death-rates in the twenty towns last week were 13·7 in Portsmouth, 15·9 in Leicester, 16·4 in Bradford, 18·1 in Birmingham, 18·3 in Oldham, and 18·5 in Sheffield. The rates in the other towns ranged upwards to 24·3 in Manchester, Liverpool, and Bristol, 24·8 in Leeds, and 25·4 in Sunderland. During the thirteen weeks of last quarter the death-rate in the twenty towns averaged only 21·5 per 1000, against 25·0 and 24·2 in the corresponding periods of 1878 and 1879.

The deaths referred to the seven principal zymotic diseases in the twenty towns, which had been 342 and 398 in the two preceding weeks, further rose last week to 401; they included 105 from scarlet fever, 87 from measles, and 39 from fever, principally enteric. The annual death-rate from these zymotic diseases averaged 2·7 per 1000 in the twenty towns; it ranged from 0·7 and 1·0 in Wolverhamptom and Sheffield, to 3·5 in Oldham and Sunderland, and 4·1 in Nottingham. Scarlet fever showed the largest proportional fatality in Sunderland, Norwich, Nottingham, Oldham, and Bristol; and whooping-cough in Nottingham, Portsmouth, Sunderland, and Leeds. The highest death-rates from fever occurred in Plymouth, Leicester, and Leeds. The 17 deaths referred to diphtheria in the twenty towns included 11 in London. Small-pox caused 38 more deaths in London and its suburban districts, and 2 in Birmingham; no fatal case of this disease was recorded in any of the eighteen other provincial towns. The number of small-pox patients in the Metropolitan Asylum Hospitals, which had steadily increased from 77 to 440 in the ten preceding weeks, further rose to 447 on Saturday last. The number of new cases of small-pox admitted to these hospitals, which had been 65 and 146 in the two previous weeks, were 85 last week. On Saturday last 24 patients were under treatment in the Highgate Small-pox Hospital, being 4 less than the number at the end of each of the two preceding weeks.

The deaths referred to diseases of the respiratory organs in London, which had been 290 and 353 in the two preceding weeks, further rose last week to 363; these were, however, no less than 132 below the corrected average number in the corresponding week of the last ten years; 232 were ascribed to bronchitis, and 85 to pneumonia. The annual death-rate from lung diseases (excluding phthisis) was equal to 5·1 per 1000 in London, corresponding with the rate from the same diseases in Liverpool.

In the twenty towns last week the causes of 83 deaths were not certified, either by a registered medical practitioner or by a coroner, being equal to 2·7 per cent. of the total deaths. The proportion of uncertified deaths was equal to 1·9 per cent. in London, and averaged 3·4 per cent. in the nineteen provincial towns. No uncertified deaths were registered either in Brighton, Portsmouth, Plymouth, Nottingham, or Newcastle-upon-Tyne; while their proportion was largest in Salford, Sheffield, and Leeds.

HEALTH OF SCOTCH TOWNS.

In eight of the largest Scotch towns, having an estimated population of rather more than a million and a quarter persons, the annual death-rate averaged 25·9 per 1000 last week, against 20·8 and 22·5 in the two preceding weeks; this rate exceeded by no less than 4·6 per 1000 the average rate last week in the twenty large English towns. The rates in the eight Scotch towns ranged from 15·9 and 21·4 in Greenock and Perth, to 30·6 and 36·0 in Aberdeen and Paisley. The deaths referred to the principal zymotic diseases in the eight towns, which had been 92 and 93 in the two preceding weeks, further rose to 165 last week, and were equal to an annual rate of 4·1 per 1000, against 2·7 in the twenty large English towns. In the eight Scotch towns the zymotic death-rate last week ranged from 2·9 and 3·2 in Dundee and Greenock, to 6·1 and 8·5 in Leith and Paisley; no deaths from any of these zymotic diseases were registered either in Aberdeen or Perth. The fatal cases of scarlet fever in the eight towns, which had been 29 and 30 in the two preceding weeks, declined to 27 last week, of which 12 occurred in Glasgow, 9 in Edinburgh, and 5 in Leith. The 29 deaths from whooping-cough showed a further increase upon recent weekly numbers, and included 13 in Glasgow, 7 in Edinburgh, and 5 in Dundee. The 20 fatal cases of diphtheria also showed an increase; no less than 14 were returned in Glasgow. The 7 deaths from "fever" corresponded with the number in the previous week, and included 4 in Glasgow, 2 in Edinburgh, and 1 in Paisley. The annual death-rate from acute diseases of the lungs (bronchitis, pneumonia, and pleurisy) was equal to 6·3 per 1000 last week in the eight Scotch towns, against 4·6 in London; the increased fatality of these diseases in the Scotch towns was confined to Glasgow, but their death-rate was also exceedingly high in Aberdeen.

HEALTH OF DUBLIN.

The registered mortality in Dublin again showed a marked excess last week. The annual death-rate from all causes in the city, which had been equal to 27·0 and 35·8 in the two preceding weeks, was last week 31·6; and the death-rate during the thirteen weeks of last quarter averaged no less than 32·6 per 1000, against 20·9 in London and 21·8 in Edinburgh. The 203 deaths in Dublin last week showed, however, a decline of thirteen from those returned in the previous week; they included 28, or rather less than 14 per cent., which were referred to the seven principal zymotic diseases, showing an increase of one upon the number in the previous week. Of these 28 zymotic deaths, 13 resulted from fever (including typhus, enteric, and simple), 7 from scarlet fever, 3 from whooping-cough, 2 from diarrhœa, and one each from small-pox, measles, and diphtheria. The annual death-rate from these zymotic diseases was equal to 4·4 in Dublin, against 3·0 in London and 4·9 in Edinburgh. The deaths referred to fever in Dublin, which had been 7, 8, and 10 in the three preceding weeks, further rose to 13 last week, and were equal to a rate of mortality nearly eight times as high as the average rate from the same cause in the twenty large English towns. Fatal cases both

of scarlet fever and whooping-cough in Dublin were less numerous than in the preceding week. The deaths both of infants and of elderly persons showed an increase upon recent weekly numbers.

PROGRESS IN REGISTRATION.

Ever since the Public Health Act of 1872 mapped out the whole of England and Wales into urban and rural sanitary districts, and provided each district with an authority which is responsible for its health condition and government, an increasing demand has arisen for trustworthy vital statistics relating to these sanitary districts. The registration system, however, which had for thirty-five years been accustomed to deal only with Poor-law unions or districts and registration sub-districts, did not kindly lend itself for the provision of the required statistics of sanitary districts. The boundaries of urban sanitary districts seldom correspond with those of parishes, townships, or registration sub-districts, hence it was next to impossible for medical officers of health, even if provided with copies of the Birth and Death Registers, to compile correct statistics for their district. Not only were the urban and rural portions of a divided parish undistinguished in the registers, but in the registration of deaths in public institutions (mainly workhouses, hospitals, and lunatic asylums), the previous residence of deceased inmates was not recorded. It is satisfactory to hear that from the beginning of this year both these defects in our registration system have been removed. Registrars have been instructed to distinguish in each case whether the birth or death occurred in an urban or sanitary district, and so to describe the place of birth or death in the register, that the entry may be referred to the proper sanitary district. Instructions have also been issued by the Registrar-General, directing that in future, when registering deaths in public institutions, the registrars shall ascertain and insert in the register the previous residence of the deceased inmates. These two instructions, if intelligently carried out by registrars, will most materially assist medical officers in their statistical duties, and may, it is to be hoped, pave the way in time for the publication of official vital statistics for sanitary as well as, if not instead of, registration districts, which consist for the most part of an arbitrary aggregation of parishes and places, fixed more than forty years ago mainly for poor-law purposes. At present the only urban sanitary districts for which the Registrar-General publishes accurate statistics are the twenty largest English towns, and it cannot be doubted that much good would result from the publication of uniform and trustworthy statistics for a far larger list of urban sanitary districts. This will now become possible, in consequence of the before-mentioned improvements in our Birth and Death Registers.

HEALTH MATTERS GENERALLY AT HOME AND ABROAD.

DUBLIN SANITARY ASSOCIATION.

The eighth annual meeting of this Association was held at the Molesworth Hall, Dublin, on the 5th inst. The annual report referred to the accurate as well as graphic description given by the Royal Commissioners of the tenement houses in Dublin, and made suggestions for periodical analyses of the Vartry water; the prevention of slaughter-house nuisances; the provision of public baths and washhouses for the working classes, and the inspection and surveillance of public laundries. Dr. Johnston, president of the College of Physicians, in moving the adoption of the report stated that both the College of Physicians and College of Surgeons were entirely in accord with the movement promoted by that Association; and they were preparing a report in reference to the death-rate of the city. They fully believed that the high death-rate of the city was owing to the state of the tenement houses. They should be closely inspected, and an officer should also be appointed to investigate the cause of sickness in the tenement localities. Mr. C. H. Meldon, M.P., remarked that the Association had done admirable service in educating the public mind on sanitary subjects; but they must go further than they had yet done, and educate the minds of the lower classes on these topics, otherwise it would be impossible to carry out sanitary laws. A source of great danger was the bad condition of the connecting sewers in many of the very best houses in the city. There ought to be an inspection of those sewers, and he also concurred in the recommendation that public laundries should be registered and kept in proper condition. The Recorder of Dublin moved a resolution expressing the satisfaction of the meeting with the recent inquiry by the Royal Sanitary Commission, as being of so searching and comprehensive a character, and trusting that the recommendations of the Commission would be energetically carried into effect by the sanitary authorities.

OUTBREAK OF FEVER AT TANDRAGEE.

An epidemic of fever has recently taken place at Tandragee, a town in Armagh, with a population of some 1500 persons. It is reported that about 100 of these have been attacked, but the affection does not seem to be of a very malignant nature, as but ten or eleven persons have died from the epidemic during the past three weeks; no death has been recorded this week up to Tuesday last. It is said that no fatal cases have occurred where the patient was attended by a medical practitioner, and strict attention paid to sanitary regulations. The cause of the outbreak, which is probably a form of typhoid fever, appears to be due to contaminated water from one of the pumps which supply the town. The village schools have remained closed since the Christmas vacation.

UNHEALTHY INDUSTRIES.

Our contemporary *The Queen* is, we are glad to see, giving its readers a very able series of articles on the "Health Aspects of Women's Industries." Hygienic knowledge, to be of any real use, must be popularised, and any effort to make the industrial classes, or those who are brought in contact with them (and probably no class has better opportunities of disseminating useful knowledge than those readers of *The Queen* who practise charity as well as fashion), really acquainted with the evils and dangers to health which we encounter in our daily life is one to be encouraged; and we trust that the editor of the "Ladies' Newspaper" will continue the good work upon which he is engaged.

YELLOW FEVER.

Yellow fever has been more or less prevalent among the French garrison at St. Louis, Senegal, said to have originated from the overcrowding of the troop-ships conveying the reliefs to the garrison. Seventeen deaths were recorded between Nov. 20th and Dec. 2nd, 1880, and on the latter date a civilian was attacked, and died.

Mr. Sergeant, the medical officer of health for Bolton, has been lecturing publicly in that town on the avoidance of disease. An excellent lecture now reported is devoted to personal hygiene, and we trust it will be presently followed by one on a public hygiene. Lectures of this class are admirably adapted to instruct the hearers, and secure the willing co-operation of citizens in the difficult duties which a medical officer of health and his local authority have to perform in ralation to the public health.

An order has been issued by the Privy Council, under the Contagious Diseases (Animals) Act, 1878, setting forth the regulations to be followed in localities (areas) infected with foot-and-mouth disease.

THE SERVICES.

THE TRANSVAAL WAR.

In addition to the reinforcement of medical officers for service at the Cape, which we announced last week, the War Office has decided to send out a full Bearer Company of the Army Hospital Corps under the command of Surgeon-Major William Johnston. The company will consist of 136 non-commissioned officers and men of the Army Hospital Corps, with the following officers:—Surgeon-Major Thomas Faris, M.B., second in command; Surgeons W. C. Milward, Alfred Peterkin, P. B. Conolly, H. F. Babington, M.B., W. H. Bracken, M.D., and W. Dugdale. Captain of Orderlies James Gordon, Lieutenants of Orderlies W. Pike and H. S. Webb are attached for duty. A detachment of the Army Service Corps, consisting of one officer and forty non-commissioned officers and men, will join the company at Aldershot for transport duty prior to embarkation. The Bearer Company will, we believe, go out completely equipped, taking out ambulances, surgery waggons, stretchers, cacolets, and litters, the latter for convey-

ing wounded over mountainous roads, and with all the latest improvements and appliances for the special work of removing wounded from the field, dressing their injuries, and conveying them to the field hospitals. Surgeon-Major Johnston, who has been selected by the Director-General for the command, has recently returned from a tour of service in South Africa, and was present at the storming of Secocoeni's stronghold in 1879, where the Bearer Company under Surgeon-Major Hector did excellent service.

Brigade-Surgeon Edward M. Sinclair, M.D., has been ordered to the Cape for immediate service in the Transvaal.

Deputy Surgeon-General Thomas William Fox, M.D., has been appointed Principal Medical Officer of the Chatham District, in succession to Surgeon-General Henry Kendall, M.D., who retires on half pay.

Surgeon-Major David Woods, half-pay Medical Department, has been permitted to commute his half-pay.

SCOTS GUARDS.—Surgeon William Campbell, M.B., from the Medical Department, to be Surgeon; Surgeon G. S. Robinson, from the Medical Department, to be Surgeon; Surgeon Robert F. Cumming, from the Medical Department, to be Surgeon.

ROYAL NAVAL ARTILLERY VOLUNTEERS (Liverpool Brigade).—The following appointments have been made:—Alfred Charles Edward Harris to be Surgeon; Peter Murray Braidwood, M.D., to be Honorary Surgeon.

Correspondence.

"Audi alteram partem."

MEDICAL EDUCATION.

To the Editor of THE LANCET.

SIR,—The perusal of your leader on Medical Education induces me to offer a few remarks on this subject, and I will confine what I have to say to one point, and that is the question of apprenticeship as the commencement of a medical career. When, in 1872, I had the honour of giving the introductory lecture at the Middlesex Hospital, I ventured to express my own doubts as to whether the abolition of the old system of apprenticeship had been an advantageous move in the cause of medical education. Since the date just named, my opportunities of observation among students when in course of training by lectures and when under examination have increased much, and certainly the conviction is now strong in my mind that the abolition of apprenticeship was a great mistake, and a move that was much to the disadvantage of the medical student. A young man goes from school to live with a medical practitioner, and there he learns to compound the medicines which his master prescribes in his book when he comes in from his rounds. He sees how the mixtures look when they are made, and if they are clear and pleasing to the eye, if not to the palate, of the patient; and while gaining knowledge on these points, he soon becomes ready at reading and writing prescriptions—matters in which the knowledge of even the advanced students of the present day is often strangely deficient.

Not to mention the treatment of small surgical cases that come at all times into the surgery, whereby manual dexterity and tact are early acquired and developed, the apprentice enjoys the opportunity of going out with the assistant to visit patients at their own homes, and so learns to speak with wisdom and judgment to those who are sick, so acquiring "the mystery of practice"; and while thus employed he finds out pretty soon, and in good time, how he really likes the actual practice of the profession; and if he does not take kindly to it he can withdraw and turn to some other way of getting his living, for none are to be so sincerely pitied as those who have been led to seek their bread by the practice of physic, while they have an innate loathing of their art. There can hardly be even tolerable success without might or earnestness; mind must be thrown into the work, and "there cannot be might or earnestness—of the best sort—in an uncongenial enterprise" (THE LANCET, p. 65, Jan. 8th, 1881).—Yours, &c.,

JOHN C. THOROWGOOD, M.D., F.R.C.P.

Welbeck-street, W., January, 1881.

THE NEW FORM OF GAG.

To the Editor of THE LANCET.

SIR,—With reference to Mr. T. Smith's letter on the above in your issue of last week, I wish to state, in fairness to Messrs. Matthews, that they were the first, about three years ago, to construct at my suggestion the double-ended gag *with the sliding ring-catch*, which Mr. Smith erroneously speaks of as an ingenious adaptation of Messrs. Mayer and Meltzer. In fact, it was at the request of Mr. Mayer that I lately sent him my gag to copy.

The addition of the tongue-plate, as suggested by Mr. Smith, will, in my opinion, be no improvement, as one of the great features of the gag (as shown in the illustration) is its simplicity and adjustability.

After considerable experience in operations about the mouth, where an anæsthetic is used, I have come to the conclusion that the tongue should be left perfectly free, and only occasionally depressed with a suitable spatula when dealing with parts which its presence obscures; for I have found that with the continuous pressure of a plate the tongue is always liable to bulge up behind it, and so impede or prevent respiration by pressing on the glottis, causing great danger to the patient and anxiety to the operator.

I am, Sir, yours obediently,

Welbeck-street, Jan. 10th, 1881. WILLIAM ROSE.

MAIN SEWER VENTILATION—CITY FILTH AND WATERCLOSETS.

To the Editor of THE LANCET.

SIR,—I suppose some people will say that an official ought not to waste his time by making any reply to adverse criticisms on his works and recommendations. This, no doubt, in a general way is true, but as there are special cases set forth in THE LANCET of the 8th inst., and replies to which may have general interest, I venture to break the rule.

At p. 70 of your last issue, under the heading "Sanitation in Leeds," the favourable returns as to the local health are commented upon. I beg to observe that in 1867, when making inquiry into rivers' pollution, I learned that the new sewers and drains were unventilated, and that the large main outlet sewer presented its open end unprotected for the wind to blow into, and so drive sewage gases, with increased force, to the upper portions of the town. There had been and were at the time many cases of fever throughout the town, but more especially in the new and better class of suburban houses, which had been drained to the new sewers. I obtained returns of the expenditure on these new sewers, and for the same period a return of the rate of local mortality; and I pointed out to the Chairman of the Works Committee that an increasing death-rate had followed closely the increasing main sewering and draining expenditure, and I put the question to him, "Do you think such result should be?" There was of course only one form of answer possible—namely, that the result ought to have been the other way. I then pointed out that the open-mouthed main sewer should be closed so as to allow sewage to flow out and prevent the wind driving in, that all the main sewers should be abundantly ventilated, and that house drains should be disconnected by external ventilation. These things have been done, and more, the local surveyor having

gone a very wide step in advance, by untrapping all the street gullies, to the extent of some 20,000 in number, the aggregated area of the whole being about 3600 square feet. I do not know of any other town which has gone so far in main sewer ventilation. You give the results in your notice, as above quoted—namely, a local death-rate for the four weeks ending the 27th of November, 1880, not exceeding 19·9 per 1000, as against 25·6 in the corresponding period of 1879. There is no one thing connected with the main sewering and house draining so obstinately resisted as is main sewer ventilation. The engineers' inspectors, at their local inquiries for main sewering or sewers' extensions, stipulate, before promising to recommend sanction, that the sewers shall be fully and properly ventilated. The promise may be given, only to be entirely neglected, or most inefficiently carried out; and then, if there is defective workmanship in the sewer construction, in flushing, and, as a consequence, foul accumulations, the few small openings made at wide intervals apart become nuisances and are closed—so that main sewer ventilation ceases, excepting through the drains and into the connected houses, the results being malarious sickness. Half-informed men then, both at home and abroad, take up their parable and denounce main sewering, house draining, and watercloseta, as if these were mere inventions of the evil one to inflict sickness and misery on man. Let me repeat once again that house-drains which do not drain, and main sewers which do not sewer—that is, do not unceasingly transmit all sewage by an even and continuous flow to some common outlet—must not claim my parentage. The sewers and drains I recommend must have full, abundant, and free ventilation to the external air—every house to be so drained, ventilated, and connected with the main sewers, so as to be free from any possibility of scourge taint, as if standing isolated in the middle of a separate plot.—I remain, Sir, yours faithfully,

London, Jan. 11th, 1881. ROBERT RAWLINSON.

BOGUS DEGREES AT HOME.

To the Editor of THE LANCET.

SIR,—As the question of reform in medical education is coming more and more to the front, there are one or two questions which many who are interested in the subject would like to have answered.

It has been asserted that the Medical Corporations of Scotland have solved the whole problem. In view of this assertion, I ask—

(1) Is it true, as has been alleged, that the Fellowship of the Royal College of Surgeons of Edinburgh can be obtained *without examination*, upon the payment of the necessary fee?

(2) Is it a fact that the F.R.C.S. of Edinburgh is a sufficient qualification for the office of surgeon to any (or some) of the metropolitan hospitals?

(3) Can a candidate who has failed to obtain the double Edinburgh qualification (L.R.C.S., L.R.C.P.) obtain the L.R.C.P., or some similar licence, and then be straight away elected to the F.R.C.S.?

If these things indeed be true, then there is gross injustice and a glaring inequality between the Fellowship of the London College of Surgeons and that of the Edinburgh College. The F.R.C.S. Eng. requires an extended curriculum and a strict examination. If the Edinburgh F.R.C.S. can be bought, it is clearly a much lower title, while the public is under the belief that the two are of equal value. Well, if this be the solution that is satisfactory to the Scottish Corporations, it is certainly not so to those who, like myself, claim to be

A DISINTERESTED MEDICAL REFORMER.

Jan. 11th, 1881.

MEDICAL NOTES IN PARLIAMENT.

IN the House of Commons on Thursday, Mr. P. A. Taylor again gave notice of his anti-vaccination resolution, which he subsequently put down for discussion a month hence. It is in the following terms: "That, in the present unsettled condition of medical opinion in regard to the safety of using ordinary humanised lymph, as also of the safety, effectiveness, and practicability of the use of animal vaccine, it is, in the opinion of this House, inexpedient and unjust to enforce Vaccination under penalties upon those who regard it as unadvisable or dangerous."

On Friday, Mr. Stansfeld reintroduced the Bill for the repeal of the Contagious Diseases Acts. The names on the back of the Bill are Mr. Stansfeld, Mr. W. Fowler, Mr. H. Fowler, and Mr. J. Cowen. Mr. O'Shaughnessy brought in a Bill further to facilitate the building, enlargement, and maintenance of reformatory institutions in Ireland. Mr. Hardcastle, in conjunction with Sir Trevor Lawrence and Dr. Farquharson, brought in a Bill to amend the Medical Act, 1858; and Mr. Gray, a Bill to provide for the better notification of infectious diseases in Ireland. Petitions were presented on behalf of Dr. C. A. Holcombe and Surgeon-Major T. G. Skardon for inquiry into their respective cases. A copy was presented of further correspondence respecting the manufacture of "oleomargarine" in the United States.

On Monday a return, ordered last August on the motion of Mr. Meldon, was presented of all medical officers of workhouses, &c., in Ireland who have resigned their offices and applied to their Boards of Guardians for superannuation. A return, ordered in the same month on the motion of Mr. Callan, of correspondence relative to the treatment of patients in Dr. Steevens's Hospital, was also presented. Mr. Dillwyn reintroduced his Bill to amend the laws relating to the custody and treatment of lunatics, and it was put down for second reading on Wednesday, May 25th. Mr. Errington gave notice that on Monday next he will ask the Vice-President of the Council whether he will agree to the appointment of a Select Committee to continue the inquiry commenced in 1878 into important questions of medical reform. Mr. Grantham asked the Secretary of State for India if he has inquired, in pursuance of his promise in August last, of the proper authorities in India, whether, by the report of a medical board dated September 5th, 1868, signed by Surgeon-Major Peskett, Surgeons Lowdell and Condon, and Assistant-Surgeon Walsh, at Nynee Tal, Capt. Chatterton was not recommended to take twelve months' leave of absence for the purpose of returning to England to undergo an operation—viz., the division of the left tendo Achillis—on the ground that it was not safe to perform the operation in India. Whether Surgeon-Major Powell, acting as garrison surgeon in Fort William, Calcutta, did not afterwards, in April, 1869, confirm the above recommendation on the same ground. Whether the only report on which the despatch of January 5th, 1869, ordering the compulsory retirement of Captain Chatterton, was founded, and which practically alleged that he was shamming, was not that made in Nov. or December, 1868, by Assistant-Surgeon M'Dermott, who was shortly afterwards removed from the medical charge of that and other cases previously under his care. And how it was that Captain Chatterton was dismissed the army in April, 1869, on the report of an assistant-surgeon, when Captain Chatterton was acting on the reports of more eminent surgeons made both before and after the report of the assistant-surgeon. The Marquis of Hartington briefly replied that he had caused inquiry to be made into the case, and was waiting the result. Mr. Parnell put a series of questions as to the treatment of certain members of the Land League in Tralee gaol. Mr. Forster postponed a detailed reply, but stated that instructions had been sent to Dublin, in reply to a complaint by the prisoners, directing that their personal requirements should be attended to.

On Tuesday, petitions for inquiry into the Indian Medical Service were presented on behalf of Matthew Moriarty and William Courtney. Mr. Errington gave notice of a Bill to alter the qualifications required for holding certain medical appointments.

On Wednesday a further petition re the Indian Medical Service was presented from James R. Jackson.

On Thursday, Mr. Dwyer Gray, ex-Lord Mayor of Dublin, questioned the Chief Secretary for Ireland as to an outbreak of fever at Tandragee. Mr. Forster said he was sorry there had been an outbreak of fever at Tandragee. It was caused, not by the importation of foreign flax, but by the impurity of water obtained from a well. The Local Government Board were doing all they could to prevent the spread of the fever. The well had been closed, a second medical officer had been appointed in the district, and one of the medical inspectors of the Board had been specially sent to Tandragee. The latest report said the disease was abating, and that the number of deaths up to Tuesday was seven, not eleven.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

AT a quarterly meeting of the Council, held on Thursday last, after the transaction of the ordinary routine business, the Committee on Preliminary Examinations, appointed on Dec. 9th, 1880 (see THE LANCET, Dec. 11th, 1880), presented their first report, dated January 10th. They recommended that the preliminary examinations for the diplomas of Member and Fellow, at present conducted by the College of Preceptors under the authority of the Council, should cease from and after the 31st of December, 1881, and that in communicating the decision to the General Medical Council, it should be intimated that the giving up of the College Preliminary Examinations renders it in the highest degree desirable that the General Medical Council should, so far as may be possible, require that examinations recognised in lieu of the College examination should be held at such times and places as may best suit the convenience of candidates who desire to enter the medical profession. With regard to the regulations relating to the several preliminary examinations recognised by the College, whether for the Fellowship or Membership, the committee recommended (1) that a certificate of registration by the General Medical Council shall entitle a candidate to commence his professional education at any time after the date of registration; (2) that the Council reserve to themselves the right of determining the conditions of admission to examination for the diploma of the College in the case of any colonial, Indian, or foreign student not registered by the General Medical Council; (3) that, in future, candidates for the diploma of Fellow be not required to undergo any preliminary examination beyond that required for the diploma of Member, and (4) that the regulations for obtaining the diplomas of Member and Fellow of the College be altered in accordance with these resolutions. The Committee has reserved to a further report the subjects contained in Dr. Haldane's communication respecting the desirability of candidates for the medical profession being required, before they enter on the purely medical curriculum, to have been instructed and examined in the rudiments of natural science, physical, chemical, and biological (see THE LANCET, Dec. 11th, 1880).

The Committee on the necessary arrangements for the institution of additional examinations for the diplomas of Member and Fellow, appointed on Nov. 13th, 1879 (see THE LANCET, Nov. 15, 1879), presented their second report, dated Jan. 6th, 1881. In their first report, dated May 10th, 1880 (see THE LANCET, May 15th, 1880), the Committee recommended that notice should be given to the several medical authorities concerned in "the conjoint scheme" of the intention of the College to withdraw from that scheme. This recommendation was adopted on June 10th in a modified form—namely, that "in view of the uncertainty which prevails as to the compulsory establishment of a conjoint scheme in each division of the united kingdom, the Council give notice to the several medical authorities in England, of their intention, whether alone or in conjunction with other bodies, to make arrangements for the institution of a complete examination to be passed by all candidates for the diplomas of Member and Fellow of the College." In their second (present) report the committee state that at their request the president addressed a letter to the President of the Royal College of Physicians of London, wishing him and other delegates from his College to meet the committee and confer on the practicability of making arrangements for a joint examination for qualification to practise medicine, surgery, and midwifery. That the invitation was declined on the ground that the Royal College of Physicians, being bound by the terms of the conjoint scheme, dated the 1st of May, 1877, could not take part in the formation of any other examining board until after the expiration of five years from the 1st of October, 1877, the shortest time fixed by the scheme for its duration; and that the President, on behalf of the Committee, pointed out to the President of the Royal College of Physicians that the interpretation thus put upon Section 12 of the scheme was at variance with that held by the College—namely, that the said section is binding on the several medical authorities only on condition that the conjoint scheme has come into actual force. To this objection the President of the College of Physicians has not yet replied. Having failed in their endeavours to bring about a conference with the Royal College of Physicians, the Committee entered without further delay into the consideration of the arrangements for the institution of further examinations for the Membership and Fellowship. The Committee has reserved any recommendations on the institution of examinations in chemistry, materia medica, medical botany, and pharmacy; but in regard to medicine and midwifery the Committee recommended the following resolutions for adoption:—1. That there be four instead of two examiners in medicine. 2. That the examination in medicine, both written and *viva voce*, be extended, and do include the examination of patients. 3. That on and after Jan. 1st, 1882, every candidate for the final Membership or Fellowship examination be required to pass an examination in midwifery, unless he shall possess a recognised qualification in midwifery, or, before obtaining the diploma, shall produce a certificate of having passed the necessary examinations entitling him to a recognised qualification in midwifery. 4. That there be two examiners in midwifery. 5. That the examination in midwifery be partly written and partly *viva voce*. 6. That candidates, having passed the examination in midwifery for the Membership, or any examination recognised as equivalent thereto, be not required to undergo any further examination in midwifery for the Fellowship. 7. A candidate for the Membership or Fellowship to be exempted from the necessity of passing an examination in medicine or midwifery—(*a*) if he possess any degree, diploma, or licence in medicine or midwifery, registrable under the Medical Act of 1858, as a legal qualification to practise in medicine or midwifery, as the case may be; (*b*) or any degree, diploma, or licence in medicine or midwifery, of a Colonial, Indian, or foreign university, which the Council may, on special application, consider to be sufficient.

The reports of both committees were adopted, and it was resolved that the recommendations contained therein should take effect at once, without waiting for the confirmation of the minutes.

Medical News.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—The following gentlemen passed the Primary Examination in Anatomy and Physiology at meetings of the Board of Examiners during the week:—

J. England Walker and William Atkinson, University College; James Darbyshire and Benjamin Blakemore, Manchester; W. A. Winship, Newcastle-on-Tyne; Henry Knowles, Leeds; Percy H. White, Edinburgh; James Cox, Melbourne, Australia; Herbert Ley, Walter F. Mitchell, and Bowen S. Mends, St. Bartholomew's Hospital; George Stoker, Joseph R. Lock, and Herbert C. Hodges, St. Thomas's Hospital; David P. Key, H. H. W. Button, and Thomas B. Winter, Guy's Hospital; Arthur W. C. Peskett, and Adolphus J. Richardson, London Hospital; Ithel P. Llewelyn, King's College; Reginal L. Huzzey, Charing-cross Hospital; James H. Daniel, John E. London, Thomas A. Guinness, Robert Cheyne, William S. Hayman, Samuel Campa, Samuel C. Philson, Charles H. Pleasc, and Meryon S. Wilson, King's College; George F. Phillpot, Francis J. Lea, Frederick W. Cock, Hedley V. Drew, Donald S. Gunn, and Charles J. Lumpkin, University College; Robert Hall Wilkinson, Gaskion R. M. Wright, Philip T. Richards, William T. Partridge, Rhys S. Jones, William H. Clark, Francis Dean, St. Bartholomew's Hospital; Edgar Wakelam, Augustus L. Paliologus, Wilfred Howard, and Ernest D. Minter, Guy's Hospital; George Hessenaur, London Hospital; Charles H. Thompson, Dublin and St. Thomas's Hospital; Arthur J. Barnard, St. George's Hospital; Henry J. C. Godfrey, John A. Scothern, John E. Dunn, and Penn Furnivall, St. Thomas's Hospital.

Of the 146 candidates examined 66 were referred for three and seven candidates for six months further anatomical and physiological study.

APOTHECARIES' HALL.—The following gentlemen passed their examination in the Science and Practice of Medicine, and received certificates to practise, on Jan. 6th:—

Clarke, Fincastle Geo. Barlow, Upper Norwood.
Hodgson, John, Oldham, Lancashire.
Knaggs, Henry Valentine, Camden-road.
Prendergast, Joseph Moran, Melbourne, Australia.
Ross, Ronald, Southampton.

The following gentlemen also on Dec. 30th passed their Primary Professional Examination:—

John Hoole, St. Bartholomew's Hospital; Fredk. Hamilton Kenny, London Hospital.

[The address of Mr. Wordley, in the list published on Jan. 1st, should have been printed "Great Suffolk-street."]

BEQUESTS AND DONATIONS TO MEDICAL CHARITIES. Mr. J. F. Stanford, F.R.S., late of North Bank, Regent's Park, bequeathed £25,000 to St. Mary's Hospital, to build a new wing to bear the name of his mother, Mrs. Mary Stanford. The Gloucester Infirmary becomes entitled to £500 by the will of the late Mr. W. J. Holt, of Gorphwysfa, Carnarvonshire. As one of the residuary legatees of the late Dr. Scott, of Perth, the County and City of Perth has received £3603 9s. William Denis Browne has given £100 to the Meath Hospital, Dublin; and the Adelaide Hospital has received £100 under the will of the late Misses Adams. Mr. William Tattersall has given £1000 to the Blackburn and East Lancashire Infirmary, in augmentation of the endowment fund.

DEVONSHIRE HOSPITAL, BUXTON.—Dr. Robertson, Chairman of the Board of Trustees and Committee of Management of this charity, is able to give a favourable report of the institution, to which there has now been added a Samaritan Fund. A good feature in the administration of the charity is the issue of postal cards to in-patients on leaving the hospital, to be filled up and returned six weeks after discharge, and on which is to be stated the result of the treatment received. During the seven years this arrangement has been in existence 7095 of these cards have been returned; by these, 5579 patients are reported as improved, 2077 as no better, and 39 as having died.

THE Baxter Physical Science Scholarship of £116, conferred by the University of Edinburgh on the most eminent B.Sc. who has taken his degree during the present or the preceding year, has been awarded to Mr. D. Orme Masson, lecturer on Chemistry at University College, Bristol, who is prevented from accepting it in consequence of holding his present appointment.

UNIVERSITY OF DUBLIN.—The Board of Trinity College have granted the degree of Bachelor in Medicine (without fees) to Mr. John Charles Martin, for distinguished success in having obtained double first place at the recent examinations for medical and surgical degrees.

THE salary of the medical superintendent of the Three Counties Lunatic Asylum has been increased from £600 to £700, and that of the senior assistant medical officer £10 a year, up to £200.

AT the quarterly meeting of the Directors of the Naval Medical Supplemental Fund, Dr. H. J. Domville, C.B., Inspector-General, in the chair, the sum of £60 was distributed among the several applicants.

THE Hospital Sunday collection in Liverpool, made on the 9th inst., has realised, so far as is at present ascertained, a sum of £2871, against £2819 last year. At Aberdeen the collection amounted to £432 18s. 10d.

THE magistrates of Cornwall have sanctioned the expenditure of £20,000 for the enlargement of the County Lunatic Asylum, so as to provide accommodation for 150 additional pauper lunatics.

THE Duke of Connaught has consented to preside at the anniversary festival on behalf of the Hospital for Sick Children, to be held at Willis's Rooms on March 16th.

THE Local Government Board have made a first class grant of £10 13s. for efficient vaccination to Mr. Wm. Milligan of Wirksworth.

QUEEN'S COLLEGE, BELFAST.—Prof. Nesbitt has been appointed librarian to this institution.

DR. THOMAS O'SULLIVAN has been elected Lord Mayor of Limerick.

Medical Appointments.

Intimations for this column must be sent DIRECT *to the Office of* THE LANCET *before 9 o'clock on Thursday Morning, at the latest*

BRITTON, T., M.D., M.R.C.S.E., has been reappointed Medical Officer of Health for the Halifax Rural and Combined Sanitary Districts.

BUXTON, T., M.R.C.S.E., has been appointed Medical Officer for the Kingsbury and Fazeley Districts of the Tamworth Union.

COLLEDGE, L. R., L.R.C.P., M.R.C.S.E., has been appointed Assistant Surgical Registrar to St. George's Hospital.

DAWSON, W., M.B., M.R.C.S.E., has been appointed Medical and Surgical Registrar to the Victoria Hospital for Children, vice Dr. Beckingsale, resigned.

DUNSMURE, J., M.D., F.R.C.S.Ed., has been appointed Medical Officer to the Pensioners of Trinity College Hospital, Edinburgh.

EVANS, E. P., L.R.C.P.Ed., has been appointed Medical Officer for the Mountain Ash District of the Pontypridd Union.

HALL, R. S., M.R.C.S.E., L.S.A.L., has been reappointed Medical Officer of Health for the Ince-in-Makerfield Urban Sanitary District.

HANNAH, N., L.R.C.P.Ed., L.F.P.S.G., has been reappointed Medical Officer of Health for the Ashton-in-Makerfield Urban Sanitary District.

HASLAM, G. J., M.D., M.R.C.S.E., has been appointed District Surgeon to the Salford and Pendleton Royal Hospital, vice J. Newton, promoted to House-Surgeon.

HERMAN, G. E., M.B., M.R.C.P.L., F.R.C.S.E., has been appointed Physician to the Eastern Division of the Royal Maternity Charity, vice Roper, resigned.

HOLDEN, L., F.R.C.S.E., has been appointed Consulting Surgeon to St. Bartholomew's Hospital.

ILLINGWORTH, C. R., M.B., C.M., M.R.C.S.E., has been appointed Medical Officer for the Rishton and Clayton-le-Moors Districts of the Blackburn Union, vice Pilkington.

LEAHY, A. W. D., M.R.C.S.E., L.S.A.L., has been appointed Medical Registrar at Charing-cross Hospital.

MAHON, G. A. D., M.R.C.S.E., L.S.A.L., has been appointed Medical Officer for the Eighth District of the Newport Pagnell Union.

MILNES, G. H., M.R.C.S.E., has been appointed Assistant House-Physician to St. George's Hospital.

NEWTON, J., M.R.C.S.E., has been appointed House-Surgeon to the Salford and Pendleton Royal Hospital, vice D. T. Evans, M.R.C.S.E., L.S.A.L., resigned.

PRICE, J. I., M.R.C.S.E., L.S.A.L., has been reappointed Medical Officer of Health for the Standish-with-Langtree Urban Sanitary District.

SHIVES, J., M.D., L.R.C.S.Ed., has been appointed Medical Officer of Health to the Liversedge Urban Sanitary Authority, vice Sykes.

SMITH, R., M.D., C.M., M.R.C.P.L., has been appointed an Assistant-Physician to Charing-cross Hospital.

Births, Marriages, and Deaths.

BIRTHS.

CAREY.—On the 8th inst., the wife of Richard John Carey, M.A. Camb., Medical Officer of Canning-town, E., of a daughter.

COTTON.—On the 9th inst., at Sloane-street, S.W., the wife of Holland J. Cotton, M.D., of a son.

JONES.—On the 4th inst., at Chesham-place, the wife of T. Ridge Jones, M.D., of a daughter.

KENDALL.—On the 28th ult., the wife of Surgeon-General Henry Kendall, M.D., Principal Medical Officer, Chatham District, of a son, who survived his birth only a few minutes.

MARRIAGES.

BEDFORD—DRAKEFORD.—On the 29th ult., at St. Bartholomew's Church, Sydenham, Walter George Augustus Bedford, M.B., M.R.C.S.E., of the Army Medical Department, youngest son of the late Vice-Admiral G. A. Bedford, of The Elms, Sydenham-hill, to Adelaide, eldest daughter of the Rev. D. J. Drakeford, M.A., of Elm-grove, Sydenham.

CARMICHAEL—BRIDGET-HAWES.—On the 29th ult., at St. Luke's, Redcliffe-square, Daniel Macrae Carmichael, M.B., M.C., of Portree, N.B., to Hannah Sarah, daughter of the late Mrs. Bridget-Hawes, of Priory-grove, South Kensington.

FROST—ANDERSON.—On the 8th inst., at St. Michael and All Angels', Paddington, William Adams Frost, F.R.C.S., second son of C. M. Frost, Esq., of Ladbroke-square, to Maria Deane, eldest daughter of W. J. Anderson, of Sans Souci, Cape Colony, and Westbourne-terrace, W.

HADDEN—LESLIE.—On the 11th inst., at the Parish Church, Alton, Hants, Martin Lindsay Hadden, son of the late James F. Hadden, Esq., of Union-grove, Aberdeen, to Alice, second daughter of Louis Leslie, M.D., of Amery House, Alton.

DEATHS.

ALCOCK.—On the 23rd ult., at his residence, Catherine-street, Waterford, Daniel Robert Alcock, Staff-Surgeon R.N. (retired), aged 45.

BAIN.—On the 8th inst., at "Balmoral," Bournemouth, Benjamin Bain, L.R.C.S.Ed., L.R.C.P.Ed., late of Birtley, co. Durham, aged 37.

BARFOOT.—On the 5th inst., at Freshwater Villa, Cadogan-road, Surbiton, Edward Wade Barfoot, M.R.C.S.E., in his 74th year.

DOWNING.—On the 7th inst., at Franklin-road, Brighton, the residence of his sister, Edward Hugh Downing, M.R.C.S.E., of Deptford, Kent, in the 32nd year of his age.

KNOTT.—On the 8th inst., at his residence, Harwich, and without any previous illness, William Knott, M.R.C.S.E., Half-pay, 6th (Inniskilling) Dragoons, aged 88.

WIGG.—On the 22nd ult., at King's Lynn, Norfolk, Eleanor Hart, wife of Thomas Carter Wigg, M.D., formerly of Ballarat, Victoria. (Australian papers please copy.)

WOOLLEY.—On the 31st ult., at Kent Cottage, Old Kent-road, S.E., Samuel Poole Woolley, M.B., M.R.C.S.E., &c., aged 36.

N.B.—*A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.*

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET OFFICE, January 13th, 1881.

Date.	Barometer reduced to Sea Level, and 32° F.	Direction of Wind.	Dry Bulb	Wet Bulb	Solar Radia in Vacuo	Max. Temp Shade	Min. Temp	Rain fall.	Remarks at 8.30 A.M.
Jan. 7	30·56	E.	36	34	..	43	31	..	Fine
,, 8	30·60	E.	34	32	..	40	29	...	Overcast
,, 9	30·37	W.	36	35	..	39	31	..	Overcast
,, 10	30·08	E.	35	33	..	37	32	..	Overcast
,, 11	29·83	E.	34	33	..	37	30	..	Snowing
,, 12	29·46	N.W.	31	..	..	35	27	0·11	Overcast
,, 13	29·54	N.W.	26	..	..	34	19	..	Overcast

Medical Diary for the ensuing Week.

Monday, Jan. 17.

ROYAL LONDON OPHTHALMIC HOSPITAL, MOORFIELDS. — Operations, 10½ A.M. each day, and at the same hour.

ROYAL WESTMINSTER OPHTHALMIC HOSPITAL.—Operations, 1½ P.M. each day, and at the same hour.

METROPOLITAN FREE HOSPITAL.—Operations, 2 P.M.

ROYAL ORTHOPÆDIC HOSPITAL.—Operations, 2 P.M.

ST. MARK'S HOSPITAL.—Operations, 2 P.M.; on Tuesday, 9 A.M.

MEDICAL SOCIETY OF LONDON.—8½ P.M. Mr. John Brunton, "On a case of Nævus of the Scalp successfully treated by Sodium Ethylate"; Dr. B. W. Richardson, "On Sodium Ethylate in the treatment of Nævi and other forms of disease, with remarks on Potassium Ethylate."

Tuesday, Jan. 18.

GUY'S HOSPITAL.—Operations, 1½ P.M., and on Friday at the same hour.

WESTMINSTER HOSPITAL.—Operations, 2 P.M.

WEST LONDON HOSPITAL.—Operations, 3 P.M.

PATHOLOGICAL SOCIETY OF LONDON.—8½ P.M. The following specimens will be shown:—Recurrent Multiple Sarcoma; Localised Sclerodermia (living specimen); Acute Myositis; Abscess of Liver following Dysentery; Cirrhosis of Liver in a Child; Cystic Degeneration of the Breast; Two cases of Tricuspid Stenosis; Case of Chloasma (living specimen); Perforation of Septum Ventriculorum and Thrombosis of Pulmonary Artery (card); Thrombosis of Innominate Vein; Congenital Sacral Tumour (card); &c.

ROYAL INSTITUTION.—3 P.M. Professor Edward A. Schäfer, F.R.S., Fullerian Professor of Physiology, R.I., "On the Blood."

Wednesday, Jan. 19.

NATIONAL ORTHOPÆDIC HOSPITAL.—Operations, 10 A.M.

MIDDLESEX HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL. — Operations, 1½ P.M., and on Saturday at the same hour.

ST. THOMAS'S HOSPITAL. — Operations, 1½ P.M., and on Saturday at the same hour.

ST. MARY'S HOSPITAL.—Operations, 1½ P.M.

KING'S COLLEGE HOSPITAL. — Operations, 2 P.M., and on Saturday at 1 P.M.

LONDON HOSPITAL.—Operations, 2 P.M., and on Thursday and Saturday at the same hour.

GREAT NORTHERN HOSPITAL.—Operations, 2 P.M.

UNIVERSITY COLLEGE HOSPITAL. — Operations, 2 P.M., and on Saturday at the same hour.

SAMARITAN FREE HOSPITAL FOR WOMEN AND CHILDREN. — Operations, 2½ P.M.

SOCIETY FOR THE ENCOURAGEMENT OF ARTS, MANUFACTURES, AND COMMERCE.—8 P.M. Mr. A. G. Lock, "On Causes of Success and Failure in Modern Gold-mining."

Thursday, Jan. 20.

ST. GEORGE'S HOSPITAL.—Operations, 1 P.M.

ST. BARTHOLOMEW'S HOSPITAL.—1½ P.M. Surgical Consultations.

CHARING-CROSS HOSPITAL.—Operations, 2 P.M.

CENTRAL LONDON OPHTHALMIC HOSPITAL. — Operations, 2 P.M., and on Friday at the same hour.

HOSPITAL FOR WOMEN, SOHO-SQUARE.—Operations, 2 P.M.

NORTH-WEST LONDON HOSPITAL.—Operations, 2½ P.M.

ROYAL INSTITUTION.—3 P.M. Mr. Francis Hueffer, "On the Troubadours."

Friday, Jan. 21.

ST. GEORGE'S HOSPITAL.—Ophthalmic Operations, 1½ P.M.

ST. THOMAS'S HOSPITAL.—Ophthalmic Operations, 2 P.M.

ROYAL SOUTH LONDON OPHTHALMIC HOSPITAL.—Operations, 2 P.M.

ROYAL INSTITUTION.—3 P.M. Mr. Warren De La Rue, "On the Phenomena of the Electric Discharge with 14,400 Chloride of Silver Cells."

Saturday, Jan. 22.

ROYAL FREE HOSPITAL.—Operations, 2 P.M.

ROYAL INSTITUTION.—3 P.M. Mr. Sidney Colvin, M.A., "On The Amazons: A Chapter in the Study of Greek Art and Mythology."

Notes, Short Comments, and Answers to Correspondents.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Local papers containing reports or news-paragraphs should be marked.

Letters, whether intended for publication or private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe, or recommend practitioners.

Letters relating to the publication, sale, and advertising departments of THE LANCET *to be addressed "To the Publisher."*

VENOUS PULSATION.

AT a meeting of the Medical Society of the College of Physicians in Ireland last week the Vice-President of the College (Dr. W. G. Smith) detailed a case of aortic and mitral valve disease in which a venous pulsation could be detected on the back of the hands. It occurred in a man aged thirty-seven, who had suffered from two attacks of rheumatic fever, and for about nine days, and until shortly before death, a venous pulsation on the back of both hands, and passing for three inches up the forearms, was apparent. There was an appreciable interval between the arterial and venous pulsation, and pressure stopped the pulsation between the part compressed and the heart, the venous wave being in the direction of the blood-stream. It was suggested that the pulsation was derived from the left side of the heart, being transmitted from the arterial system into the venous circulation through the capillaries. The heart weighed on removal 1 lb. 5½ oz.

SILICA AS AN ANODYNE IN CANCER.

To the Editor of THE LANCET.

SIR,—At the present time, when new remedies are being anxiously sought in the hope of finding one that will alleviate the intense pain experienced by those afflicted with cancer, I think it worth while to submit to the notice of your readers the following particulars connected with a case now under my charge.

On November 5th, 1880, I was asked to see Mrs. S——, residing in this neighbourhood, and, by examination, discovered that she had malignant disease of the cervix uteri, from which she had been suffering to her own knowledge for the last six months.

Her condition was one of great mental distress and bodily agony. She had had no sleep of more than ten minutes' duration for three weeks before I saw her, and was never free from pain when awake. She described the pain "as if numbers of lancets were being stuck into the lower part of the body, and as if hooks were inserted into her hips, and then torn out; and as if the bottom of her back were being cut off from the rest of her body."

I ordered one grain of silica in the form of "silicon lozenges" three times a day, and to continue taking an anodyne mixture at night, which had previously been prescribed by another medical gentleman, to whom she could go no longer in consequence of increasing weakness.

On Nov. 8th I saw her again, and I found that she had suffered much less pain, and had slept on the night of the 7th for twenty minutes at a time. As the mixture produced constipation, I ordered her to discontinue its use, and to continue the lozenges.

On Nov. 11th I saw her for the third time, and found her moving about the house, comparatively cheerful, able to read with enjoyment, and that the pain had become, in her own words, "quite bearable," and was not constant. Sleep also had returned to a considerable degree, although taking no anodyne but the silicon lozenges, the intervals between waking being less frequent.

On Nov. 20th I visited her again, and found her more cheerful than before, and, as far as pain was concerned, she informed me "that she had no real pain, only an uncomfortable feeling about the lower part of the body." The lozenges, too, seemed to soothe her, and she could now sleep soundly for one hour, and believes she would sleep for longer periods but for irritability of the bladder, which wakes her at that interval. I may mention that the disease has affected the base of the bladder, and this I believe is the cause of the irritability.

I was induced to try the silicon lozenges from the fact that my father, Dr. R. F. Battye (who was the first to use silica in the treatment of cancer), had attended a patient in the same house who had died of cancer, but had suffered no pain after the first fortnight, and remained free from pain till her death, which occurred about a year after.

If not trespassing too much on your valuable space I will send you from time to time short notes of the progress of this case.

I am, Sir, yours respectfully,

J. H. BATTYE, M.D.

St. George's-road, London, S.W., Nov. 22rd, 1880.

P.S.—The formula for "silicon lozenges" is contained in the *Edinburgh Medical Journal* for November, 1874.

"SHAM DOCTORS AND UNQUALIFIED PRACTITIONERS."

To the Editor of THE LANCET.

SIR,—In your edition of January 8th, 1881, you report two cases of sham doctors in our neighbourhood. I am quite sure if you knew the facts of both cases you would have justly treated them in a different manner.

In the first case, on page 65, an old qualified man, who has a private income, I believe, derived from a patent medicine, has been able to compete with his brother practitioners by allowing people to run up bills for various periods varying from five to thirteen years, has had a mania for rushing in and out of people's residences, and at last, when worn out, employs a man, who has never studied at or entered any hospital, to do his work. With a dog-in-the-manger spirit, he has tried to retain his hold against his fellows. This man (the assistant), after a run of three years, is sued by the Medical Defence Association, and instead of their producing over seventy fraudulent death certificates (as can be proved by the registrar who holds them), he is only summoned upon three, and fined a paltry sum.

In the second case (page 67), Mr. Wordley, a gentleman who served five years as an apprentice to a legally qualified practitioner, then went to Australia, served as an assistant, returned to England in 1870, then again served as an assistant, and received good testimonials, opened a dispensary under my surveillance in Great Suffolk-street, Borough, and through his steady working has made it a great success—so much so as to create a jealousy amongst a clique. Acting upon my advice, he entered Guy's Hospital in 1874, at forty-three years of age, and so won the good opinion of several of the professors that they did not refuse to meet him in consultation. The dispensary mentioned was carried on in the most legitimate manner—no advertisements, no prices published. I attended at stated hours, and if any important case occurred I was sent for immediately at any hour.

On Dec. 21st, 1880, Mr. Wordley was called to see a poor woman at 10.30 P.M. He found she was an old sufferer from chronic disease; from her poverty he knew it would be useless putting them to the expense of sending for me, and as he had to present himself the next day for examination at the Apothecaries' Hall, he told the friends to send for the parish medical officer, and generously gave them the fee to get the poor woman nourishment. Five days afterwards he was surprised by the friends coming and asking him for a certificate of death, as they had not followed his advice. He declined to give them one, as he had only seen the case once, and censured them for not calling in the parish aid; but as the friends did not wish for an inquest, he wrote a certificate, stating what was the matter with the patient when he saw her, signed his name as A. W. Wordley, L.S.A., he having succeeded in obtaining his diploma, after six years' study, on Dec. 23rd, at the age of forty-nine.

I am quite sure that, after my knowledge of your impartiality during the past twenty-seven years, you would not have inserted the article you did if the facts had been known. The Apothecaries' Hall and the Medical Council can prove the veracity of my statement as regards his qualification, and I consider a man who will enter the hospital at forty-three years of age, go through the microscopical minutiæ required now by the Examining Boards, deserves the highest commendation, and I beg to suggest that it is quite time that the discretionary powers assumed (?) or given (?) to coroners, coroners' officers, registrars, &c., and the false and undignified position occupied by medical men in these cases should be looked into by the Medical Council, and in a future letter (with your permission) I can open the eyes of the whole profession to facts, and not fables.—I am, Sir, yours truly,

GEORGE DANIEL HARDING, L.R.C.P., M.R.C.S.

Lorrimore-street, Jan. 12th, 1881.

To the Editor of THE LANCET.

SIR,—In reference to the inquest upon Martha Lusty, will you kindly insert the following: The daughter requested me to see her mother at 7, Bancor-court, White-street (not Bangor-terrace, Southwark-bridge-road, as stated,) at 10.30 P.M. on the 21st ult., as she feared she would not survive the night. I did so gratuitously, and advised her removal to the Infirmary. I directed her daughter how to proceed, and she promised to see to it early in the morning. They appeared to be in great poverty, and depending entirely upon the daughter's earnings. Six days after she applied for a certificate (when I thought the woman in the Infirmary), and having seen her only once I did not feel justified in giving one—hence the inquest. The above is an illustration of the "fraudulent and dangerous practices" commented on by the Jury.

I am, Sir, your obedient servant,

A. W. WORDLEY, L.S.A. Lond.

Indicus.—Our correspondent will find the information he requires so far as regards the military service in the Army Medical Warrant of Nov. 27th, 1879, published in the Army Circular of Dec. 2nd, 1879.

Leo.—Dallas's Manual.

Librarian.—Messrs. Williams and Norgate, Henrietta-street, Covent-garden.

Lexus.—Next week.

Dr. John Davies.—We cannot advise. Consult a soliciter.

Dr. Lewins.—We are compelled to dissent from our correspondent as to the utility of further discussion in the matter, at all events for the present.

THE MEDICAL STAFF OF GREAT HOSPITALS.

To the Editor of THE LANCET.

SIR,—In the important and perhaps very best eclectic periodical of any in Europe, whose articles attract alike the serious attention of THE LANCET, the *Saturday Review*, &c., and of the more ephemeral journalistic sheets, the *Revue des Deux Mondes*, November 1st, 1880 (meaning the two worlds—*l'ordre moral et l'ordre* or *monde physique* I presume), Monsieur Léon Lefort, of the Academy of Medicine, has been enlightening the public as to the amount of administrative influence claimed and granted to civil hospital surgeons in a manner which seems to apply not inaptly to the present controversy at Guy's. A few translated passages will not perhaps be uninteresting to all of us.

"We are not, let the Secretary of State (M. le Ministre) know it once for all, subordinated to the administrative body of the hospital in the ordinary sense of the word. The doctor of a civil hospital claims the right to weigh with the whole influence of his scientific authority the direction of the hospital service, but he would not consent to be the manager (*directeur*) of the hospital." M. Lefort had stated previously that even in the army, "it could never be his (the surgeon's) province to conclude contracts and bargains or collect supplies. The question is not one of substituting the medical element for the administrative one, but to apportion to each his legitimate share of action and influence" (p. 186). The whole admirable article shows the terrible consequences of making a medical department subordinate to any authority but that of the general and his staff, the commanding officer, &c., as in all military affairs, and not, as still in the French army alone almost now, to what is called l'Administration Intendance, &c., neither, in fact, more nor less than our commissariat and its branches—transport train, purveyors' department, &c. Thus two thousand sick were crammed into the Péra Hospital in spite of the reiterated warnings of Bandens, Michel Lévy, and others, with the result of widespread and devastating pyæmia (*infection purulente*) and septicæmia. Michel Lévy, like our two distinguished men at Guy's, resigned in disgust. The essay "is extant, and written in very choice" French. It is already said to have engaged the serious attention of the Minister of War, General Farre. It does credit to Professor Lefort and to the great review which has welcomed him to its pages. It is impossible in a short letter to give more than a glance at the many good and outspoken things it contains.

I am, &c., yours most sincerely,

CAMERON MACDOWALL, F.R.C.S.E., &c.,
Bombay Army.

E.I.U.S. Club, 14, St. James's-square, S.W.

Studiens.—Application might be made to Moore and Co., St. Mary-axe, E.C.

J. S.—We regret that we cannot give our correspondent the information he requires. We believe the papers have not been published.

Mr. M. W. Hilles.—If our correspondent will forward a specimen of the instrument it shall have our attention.

Ne code Malis.—The case is peculiar, and should be settled amicably. It is one for consideration on both sides. The terms should have been arranged before for an attendance so inconvenient to the practitioner. Abstractly his charge per visit is not unreasonable, but for a regular medical attendance it seems so.

THE PRACTICE OF MEDICINE AND SURGERY ABROAD.

To the Editor of THE LANCET.

SIR,—I should be glad if any of your readers would inform me what qualifications are necessary for the practice of medicine and surgery in the United States, Canada, or Egypt.—I am, Sir, yours faithfully,

Jan. 10th, 1881. M.R.C.S.

Can Surgeons claim Midwifery Fees?—Certainly; but no legal qualification seems to be necessary to claim midwifery fees. The claim of a midwife would be recognised as simply based on contract.

Dr. Haukes.—The paper will appear shortly.

ASSOCIATION OF TONSILLITIS AND RHEUMATISM.

To the Editor of THE LANCET.

SIR,—I am somewhat surprised at the association of tonsillitis and rheumatism being treated as a novelty. Dr. R. Liveing pointed it out to his clinical class at the Middlesex in 1874, but not as anything new, and he told us to give colchicum a good trial in all cases of recurrent quinsy. In a great number of cases I have been able to trace the connexion, quinsy seeming in certain members of rheumatic families to take the place of the articular affection, and I have had at least one proof of the danger of treating tonsillitis by an abortive process without due consideration, my patient as the result being laid up for sixteen weeks with subacute rheumatism. In many cases the connexion might only prove a parallel to gonorrhœal rheumatism as the result of an aborted gonorrhœa, but beyond that there is a decided association (of an almost hereditary character), which must be evident to anyone who has his attention drawn to it.

I am, Sir, yours, &c.,

Abingdon, Dec. 29th, 1880. GEORGE GOSKET.

THE "COMMERCIAL" ASPECTS OF MEDICINE.

To the Editor of THE LANCET.

SIR,—The suggestive article in THE LANCET of the 1st instant on the classing of the medical profession as "commercial" may receive a further illustration of the existing tendency in this direction. Some allowance may perhaps be fairly made for the compilers of a post-office directory in taking a too limited view of the proper relation of things; but what can be said for a leading college at Cambridge which, in the printed form sent at the end of each term to the parents or guardians of its students, places under the heading "tradesmen's bills" that of the surgeon? I give you privately the name of this college, not knowing whether or not a similar practice prevails at other colleges. That it should exist at all at Cambridge is perhaps the more remarkable since for several years past the medical department of the university cannot be said to have neglected any opportunity of advertising its desire to attract students to its teaching.

I remain, Sir, your obedient servant,

Jan. 8th, 1881. AN OLD SUBSCRIBER TO THE LANCET.

W. Y. Coombe.—There are several such institutions—e.g., Copped Hall Green, Waltham; Llanover-road, Sudbury; Box-grove, Tylehurst, Reading; Limpsfield, Surrey.

DISTRICT MEDICAL OFFICERS AS MEDICAL OFFICERS OF HEALTH.

To the Editor of THE LANCET.

SIR,—From time to time I have observed in your columns remarks deprecating the appointment of the same individual to the posts of district medical officer and medical officer of health. In your last week's issue you apparently assume that if the health officer be not also union medical officer, he will be more independent, and not in private practice. This is not so in many cases. I think your remarks are very theoretical, and display a want of information as to the inconvenience arising from divided authority and responsibility.

In several districts of this union both appointments have for many years been held by the same individual. The result has been very satisfactory in every way. In one unfortunate district, however, the reverse is the case. The result has been perpetual ill-feeling between the two officers for many years, which ill-feeling has been duly handed down to their successors.

The district medical officer in cases of small-pox, &c., visits and effects the removal of the patients, gives directions to the surveyor of the local authority as to disinfection and any other steps necessary. The officer of health never goes near the cases, but simply includes them in his fortnightly report to the local committee, together with information copied from the medical relief book. In other words, the district medical officer has the risk and responsibility, while the other useless mortal has the pay—pretty liberal, too—for the duties of a position which he himself once aptly described as "useless and anomalous," and a member of the Local Committee termed a sinecure.

This is, to say the least of it, unjust. I think your editorial opinion would undergo considerable modification if you could for a short time fill either of the above positions and feel the consequences of setting two men to worry each other, and at the same time deprive both of one-half of the power one would have if possessed of both appointments. I see no objection to the combined scheme with one officer of health not in private practice. Even then the individual cannot be ubiquitous, or so well acquainted with the districts as the union medical officers, or in a position to act so promptly. Then you have to compensate the present officers of health if they are to be superseded, especially our "useless and anomalous" friend above mentioned.

I am, Sir, yours faithfully,

Jan. 1881. PALINURUS.

*** We give space to this curious and inconsequent letter in illustration of our remarks last week. We are content with the recorded experience of the Local Government Board on the subject.—ED. L.

MEDICAL ADVERTISING AND THE SYDNEY INFIRMARY.

A most reprehensible practice of puffing medical men in connexion with cases in the infirmary of Sydney seems to prevail. An absurd instance is before us, in which "Dr. Marshall" is represented as exceeding all the surgery of Europe by curing a case of fistula. Who is to blame for this?

"*Aut viam inveniam, aut (Deo juvante) faciam.*"—Our correspondent acted rightly.

COMMUNICATIONS, LETTERS, &c., have been received from—Dr. Eberle, Easingwold; Mr. Hacket, Leeds; Dr. M'William, Culmill; Mr. Oliver, Manchester; Messrs. Macmillan and Co., Cambridge; Dr. Satchell, Tunbridge Wells; Dr. Spowncer, Gainsborough; Dr. Lloyd, Edinburgh; Mr. Duncan, Glasgow; Mr. Adamson, Hetton-le-Hole; Messrs. Poulton and Paul, Norwich; Dr. Hayward, Liverpool; Mr. Pitman, Barcelona; Mr. Pike, Exeter; Mr. Hayward, Chatham; Dr. Courtin, Paris; Dr. Blomfield, Lynn; Mr. Craig, London; Mr. Glaister, Glasgow; Dr. Alexander, Bradford; Dr. Evans, Cardiff; Mr. Hilles, London; Mr. MacDowall; Dr. Wynn Williams, London; Mr. Popert, Southport; Dr. Thorowgood, London; Dr. Thin, London; Dr. Lewins, London; Dr. Buzzard, London; Mr. Moxhay, Reading; Mr. F. D. Lys, Bere Regis; Dr. Combe, Twyford; Mr. Manby, East Rudham; Mr. R. Rawlinson, London; Dr. Bomford, Fort William; Mr. Rahu, Ipswich; Mr. Chubbe, Manchester; Mr. Hamilton, Swadlingcote; Mr. Mossman, Eastbourne; Dr. Galezowski; Mr. Horne, London; Dr. Williams, Liverpool; Mr. Parry, Ferndale; Mr. Cullingworth, Manchester; Dr. Ledlard, Carlisle; Mr. Bloxsome, Manchester; Dr. Saul, Lancaster; Dr. Caddy, London; Mr. Harding, London; Mr. de la Motte, London; Messrs. Ihlee and Homo; Dr. Rogers; Dr. Baines; Dr. George Johnson, London; Mr. Teevan, London; Mr. Rose, London; Messrs. Oliver and Boyd, Edinburgh; Dr. Lloyd Roberts, Manchester; Mr. Southam, Pendleton; Mr. H. A. Allbutt, Leeds; Mr. Fosbroke, Alcester; Dr. Charteris, Glasgow; Dr. Weaver, Longton; Dr. Dudgeon, London; Mr. Malcolm Morris, London; An Old Subscriber; M.R.C.S.; Delta; A. W. W.; Leo; A Junior; S. C.; Palinurus; Studiens; J. D. M.; &c., &c.

LETTERS, *each with enclosure*, are also acknowledged from—Mr. Grime, Blackburn; Dr. Jones, Ystrad; Mr. Carey, Canningtown; Dr. D. Powell, London; Mr. Walker, Fulbourne; Mr. Davis, Hereford; Mr. Bain, Birtley; Mr. Blomfield, Lynn; Dr. Clapperton, Broughton; Mr. Turle, Enderby; Mr. Milligan, Worksworth; Mr. Hayward, Haydock; Mr. Jones, Sowyn; Mr. Jennings, Colsford; Mr. Dingley; Mr. Nesbitt, Monaghan; Mr. Tagge; Mr. Hackett, Leeds; Mr. Clark, Macclesfield; Mr. Brettell, Dudley; Mr. A. Dingley, London; Dr. Macgregor, Clayton West; Mr. Vereland, Hertfordshire; Mr. Massingham, Walstanton; Mr. Williams, Birkdale; Dr. Sands, New York; Mrs. Hall, Torquay; Mr. Mason, Itchin; Messrs. Douglas and Co., Workington; Dr. Moore, Rothwell; Mr. Earp, Nottingham; Mr. Pike, Exeter; Mr. Healy, Newtown; Mr. D. G. Williamson, London; B., Bristol; Medicus, Birmingham; P. P.; Medicus, Blackburn; M.D., Chester-le-Street; Medicus, Oxford; T. H. J. C., Great Ilford; P. G., Preston; E. J. D., Hastings; L. M.; Joseph; A. M. D., York; C. E. G.; T. T., Brighton; H. B. R., Gipsy-hill; A. B., Greenheys; C., Fulham; M. B. S.; M.R.C.S.; Dorset; Scapula, Birmingham; Rex; B.A.; Medicus, Walthamstow; Medicus, London; Æsculapius; C. R. H., Oldham; M. W.; Medicus, Salbury; W. M., South Shields; G. B. M., Islington; &c., &c.

Morningside Mirror, Secular Review, Greenwich and Deptford Chronicle, Court Circular, Revista Frenopatica Barcelonesa, Wigan Observer, Church of England Temperance Chronicle, Isle of Wight Express, Halifax Courier, Sanitary Journal, Staffordshire Daily Sentinel, Weekly Mercury, West Kent Courier, Lancaster Guardian, &c., have been received.

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Tables of Contents, with the Index of Advertisements, for each Number can be had on application to the Publisher.

Agent for the Advertising Department in France—J. ASTIER, 67, Rue Caumartin, Paris.